



TEST DATA

Test Data Number: 3158605MIN-001
Project Number: 3158605

Testing performed on the
1900MHz MicroBTS 2x1

To
47 CFR, Part 24:2007

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: Uri Spector
Uri Spector

Date: July 25, 2008

Reviewed by: Norman Shpilsher
Norman Shpilsher

Date: July 25, 2008



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1.0 DESCRIPTION OF THE SAMPLE (EUT)

Model:	1900MHz MicroFlexBTS 2x1
Type of EUT:	PCS Base Station Transceiver
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:	<input type="checkbox"/> EN 55022:2006, Class A <input type="checkbox"/> EN 55011:1998 + A1:1999 + A2:2002, Group <input type="checkbox"/> , Class <input type="checkbox"/> <input type="checkbox"/> 47 CFR, Part 15:2007, §15.107 and §15.109, Class A <input type="checkbox"/> 47 CFR, Part 22:2007 <input checked="" type="checkbox"/> 47 CFR, Part 24:2007 <input type="checkbox"/> 47 CFR, Part 90:2007 <input type="checkbox"/> EN 55014-1:2000 + A1:2001 + A2:2002 <input type="checkbox"/> EN 61326-1:2006 <input type="checkbox"/> Class <input type="checkbox"/> for Radiated and Conducted Emissions <input type="checkbox"/> EN 60601-1-2:2001 +A1:2006 <input type="checkbox"/> Class <input type="checkbox"/> Radiated and Conducted Emissions <input type="checkbox"/> EN 61000-6-3:2007 <input type="checkbox"/> EN 61000-6-4:2007 <input type="checkbox"/> EN 61000-3-2:2006 <input type="checkbox"/> EN 61000-3-3:1995 +A1:2001 +A2:2006 <input type="checkbox"/> Other <input type="checkbox"/>



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 24	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. The EUT enclosure Radiated Emissions were tested with the transmitter tuned to low channel 512 (1930.2MHz), middle channel 661 (1960.0MHz), and upper channel 810 (1989.8MHz) operating frequency. The remote laptop computer located outside of the test site was connected to the Ethernet Port of the transmitter via CAT5 cable.

Testing was performed in frequency range from 30MHz to 20GHz.

2. The Spurious Radiated Power limits of -13dBm was correlated with field strength reference level of 82.2dB μ V/m during field strength measurements at 3m measurement distance.

Emissions at transmitters operating frequencies were removed from the Table.



3.0 TEST RESULTS

3.1 Spurious Radiated Emissions

No emissions were chosen for substitution measurements as the maximum emissions is more than 20dB below the reference limit

Radiated Emissions from 30MHz to 1GHz

Date: 07-24-2008

Company: ADC Telecommunications Inc.
Model: 1900MHz MicroBTS 2x1
Test Engineer: Uri Spector
Standard: FCC Part 24
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 dB μ V	Ant.Factor dB1/m	Total at 3m dB μ V/m	Limit dB μ V/m	Margin dB
Channel 512 (1930.2MHz)						
32.078 MHz	V	21.39	19.44	40.83	82.20	-41.37
40.39 MHz	V	27.07	15.02	42.09	82.20	-40.11
67.916 MHz	V	24.36	7.77	32.13	82.20	-50.07
81.496 MHz	V	21.06	9.10	30.15	82.20	-52.05
98.508 MHz	V	20.52	11.55	32.07	82.20	-50.13
100.45 MHz	V	19.77	11.88	31.65	82.20	-50.55
Channel 661 (1960.0MHz)						
32.424 MHz	V	21.04	19.26	40.30	82.20	-41.90
40.736 MHz	V	26.43	14.84	41.27	82.20	-40.93
81.048 MHz	V	20.20	9.05	29.25	82.20	-52.95
98.359 MHz	V	19.01	11.52	30.53	82.20	-51.67
Channel 810 (1989.8MHz)						
33.186 MHz	V	21.41	18.85	40.26	82.20	-41.94
39.559 MHz	V	26.98	15.46	42.44	82.20	-39.76
79.407 MHz	V	20.37	8.89	29.26	82.20	-52.94
98.508 MHz	V	21.02	11.55	32.57	82.20	-49.63



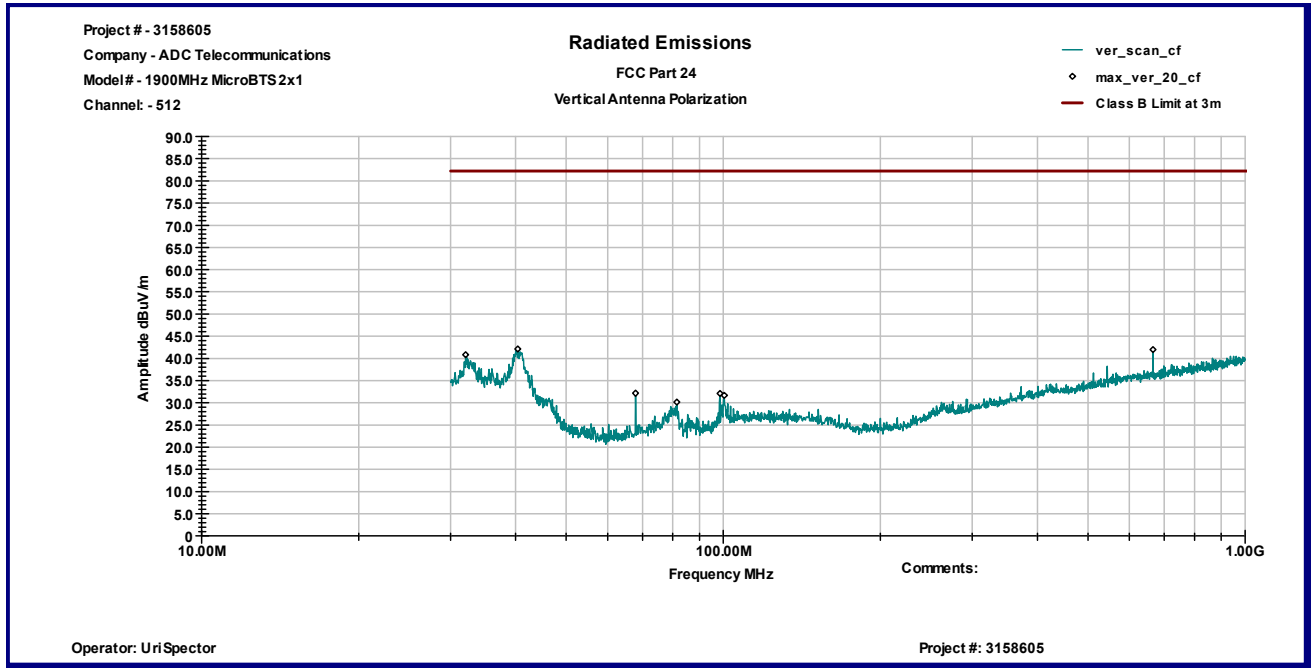
Radiated Emissions from 1GHz to 20GHz

Date: 07-25-2008

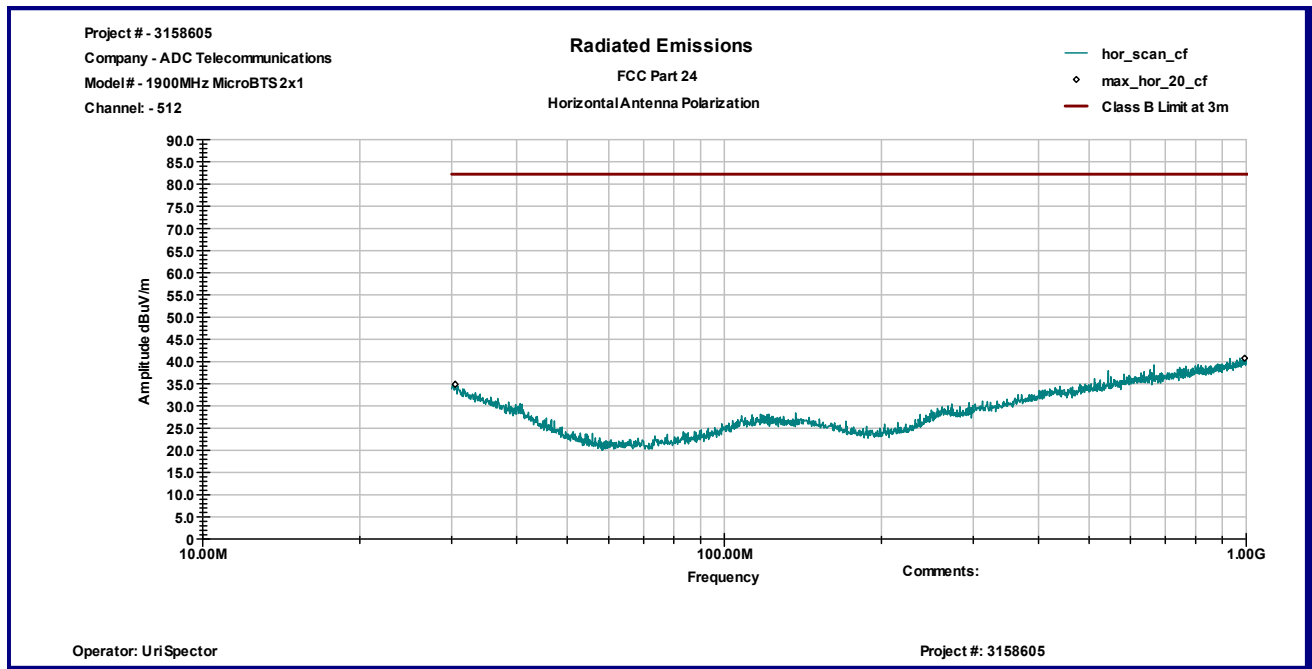
Company: ADC Telecommunications Inc.
Model: 1900MHz MicroBTS 2x1
Test Engineer: Uri Spector
Standard: FCC Part 24
Test Site: 3m Anechoic Chamber, 3m measurement distance
Note: The table shows the worst case radiated emissions
Measurements were taken using a Peak detector

Table # 2

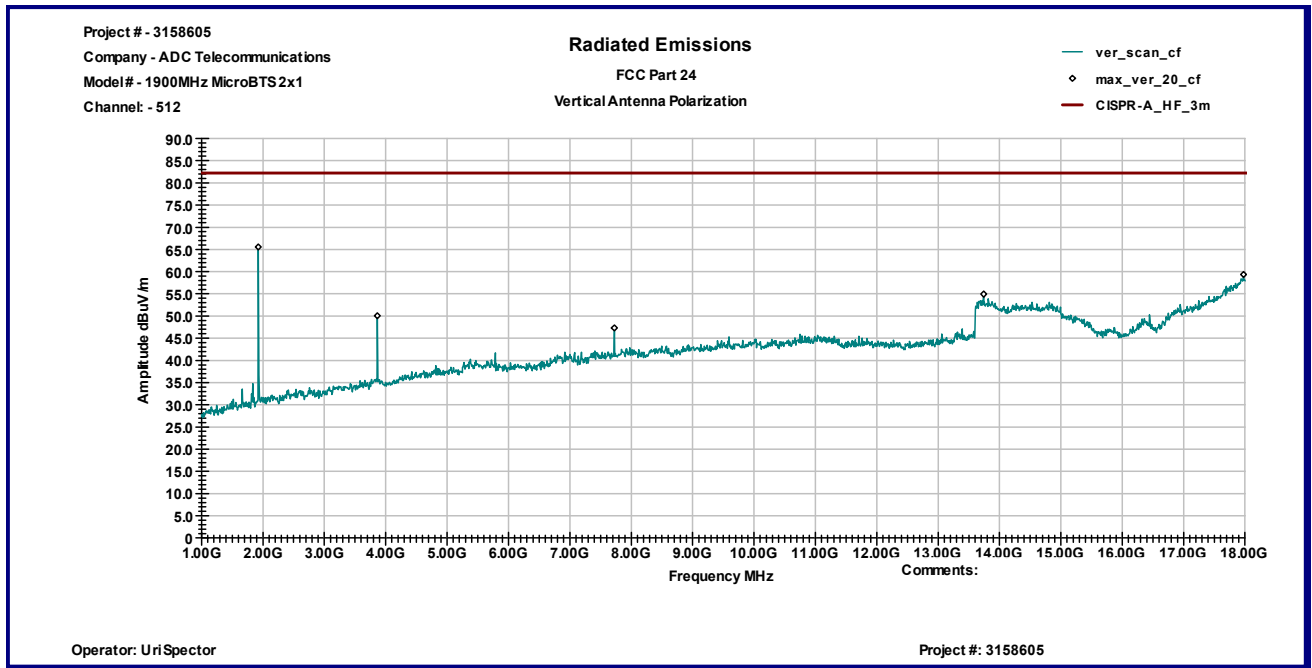
Frequency MHz	Antenna Polarity	Reading dBµV	Total C.F. dB1/m	Pre-Amp. Gain (dB)	Total at 3m dBµV/m	Limit dBµV/m	Margin dB
Channel 512 (1930.2MHz)							
3.8645 GHz	V	53.41	36.70	40.11	50.00	82.20	-32.20
7.7235 GHz	V	42.29	44.57	39.56	47.30	82.20	-34.90
3.8645 GHz	H	57.50	36.70	40.11	54.09	82.20	-28.11
Channel 661 (1960.0MHz)							
3.924 GHz	V	57.63	36.85	40.09	54.39	82.20	-27.81
7.8425 GHz	V	47.05	44.73	39.44	52.33	82.20	-29.87
3.924 GHz	H	58.22	36.85	40.09	54.99	82.20	-27.21
Channel 810 (1989.8MHz)							
3.9835 GHz	V	64.57	37.01	40.07	61.51	82.20	-20.69
3.9835 GHz	H	61.49	37.01	40.07	58.42	82.20	-23.78



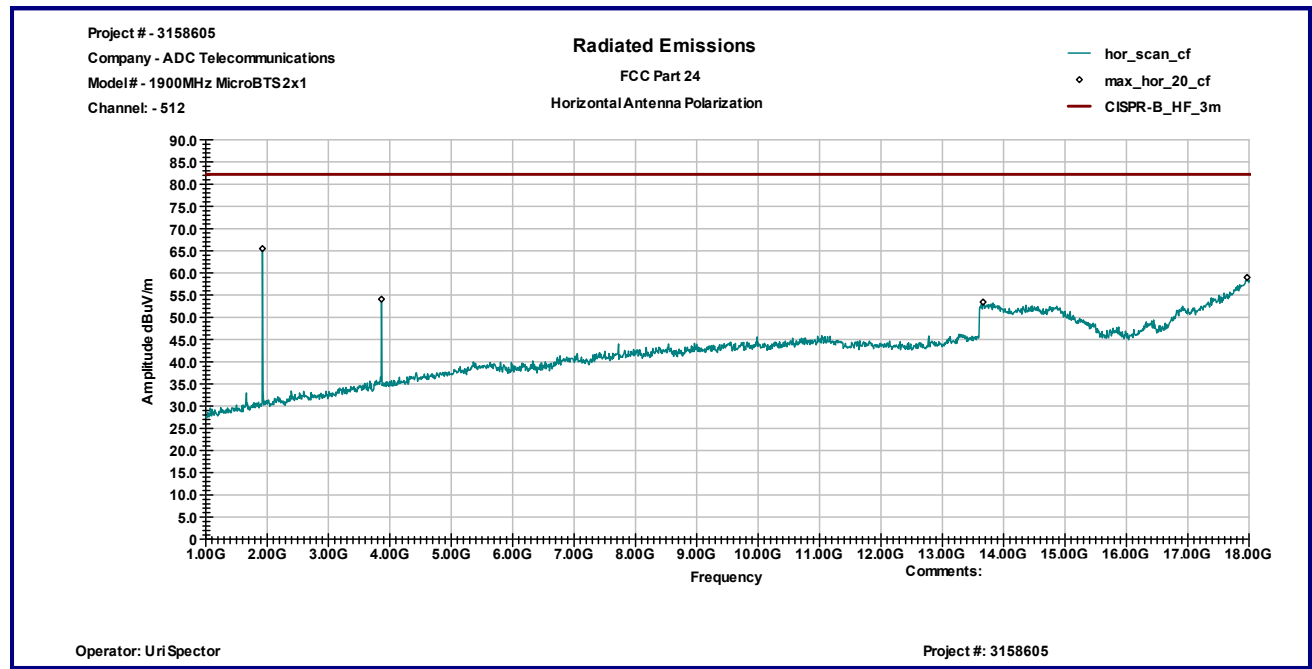
Graph 1



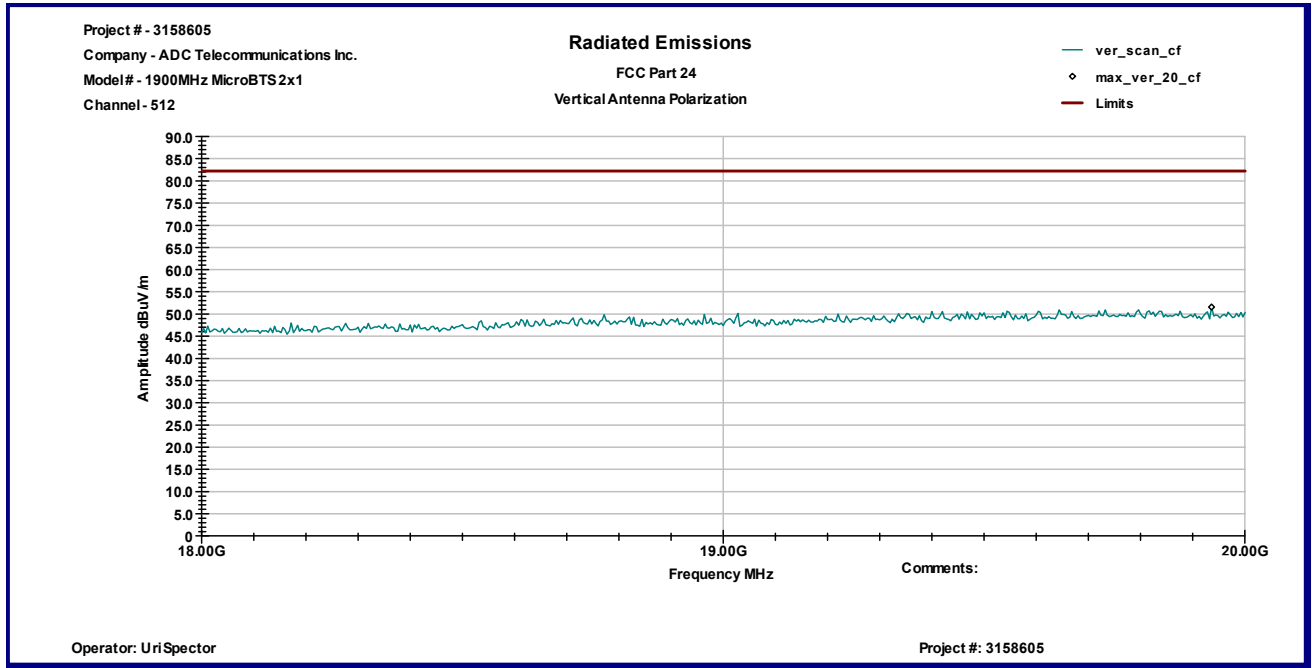
Graph 2



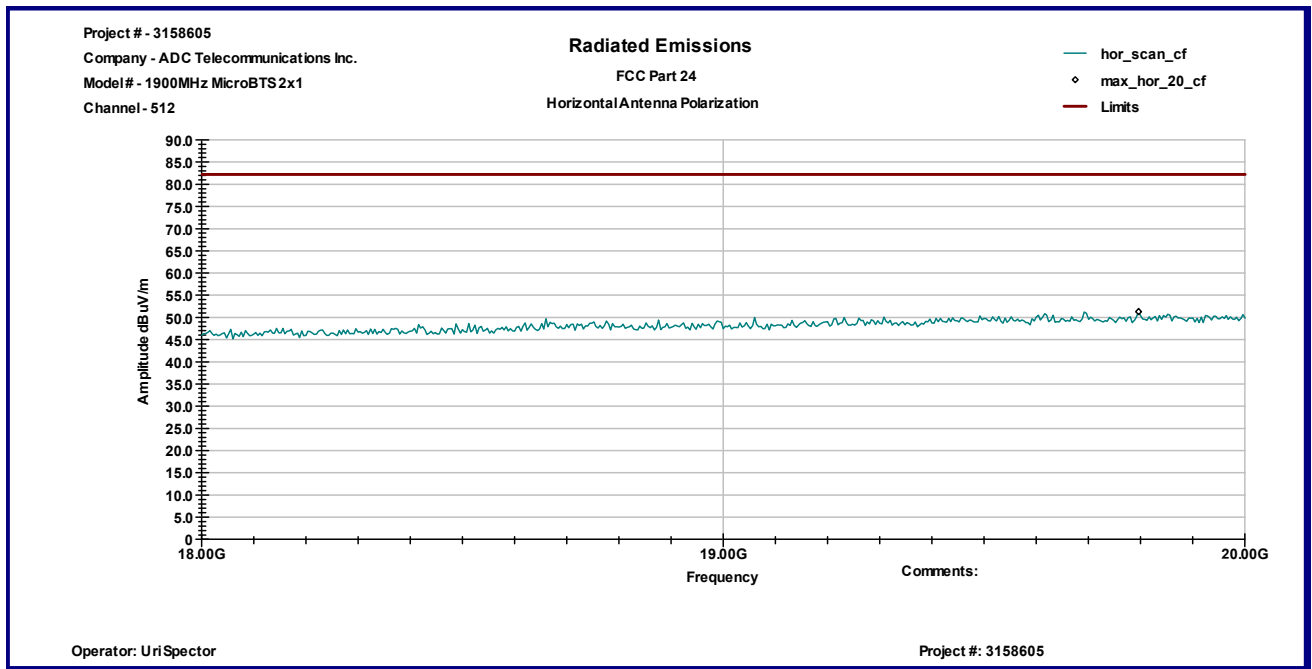
Graph 3



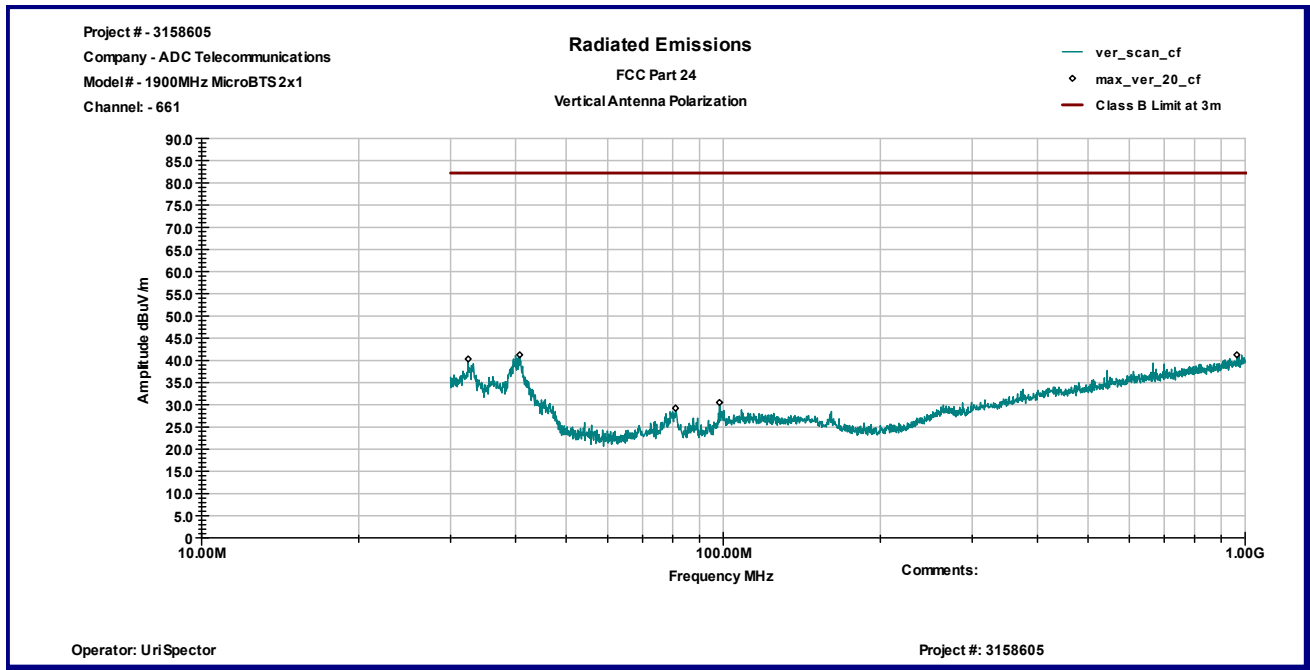
Graph 4



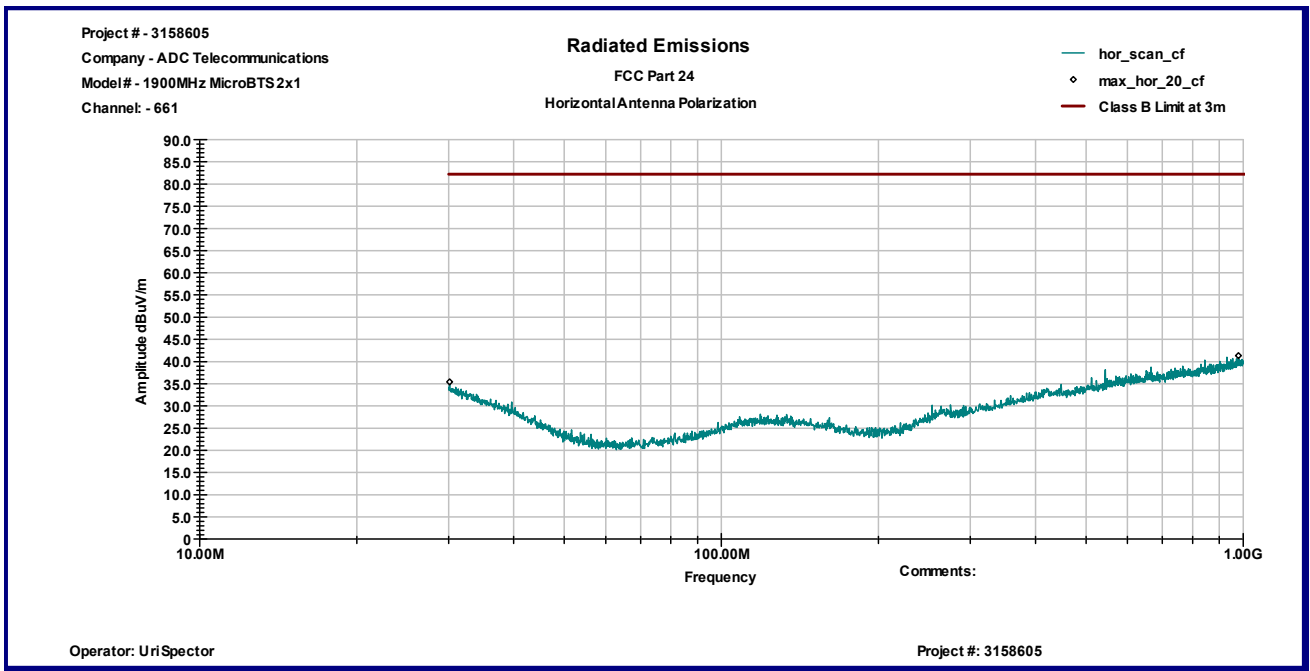
Graph 5



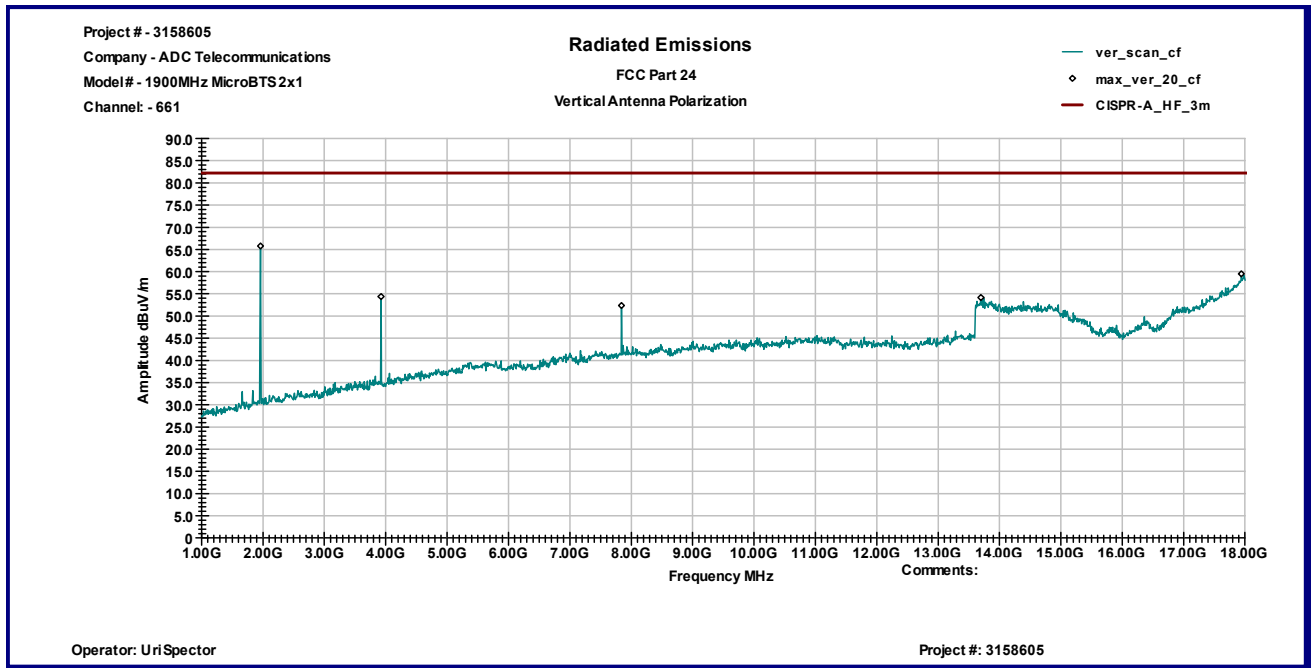
Graph 6



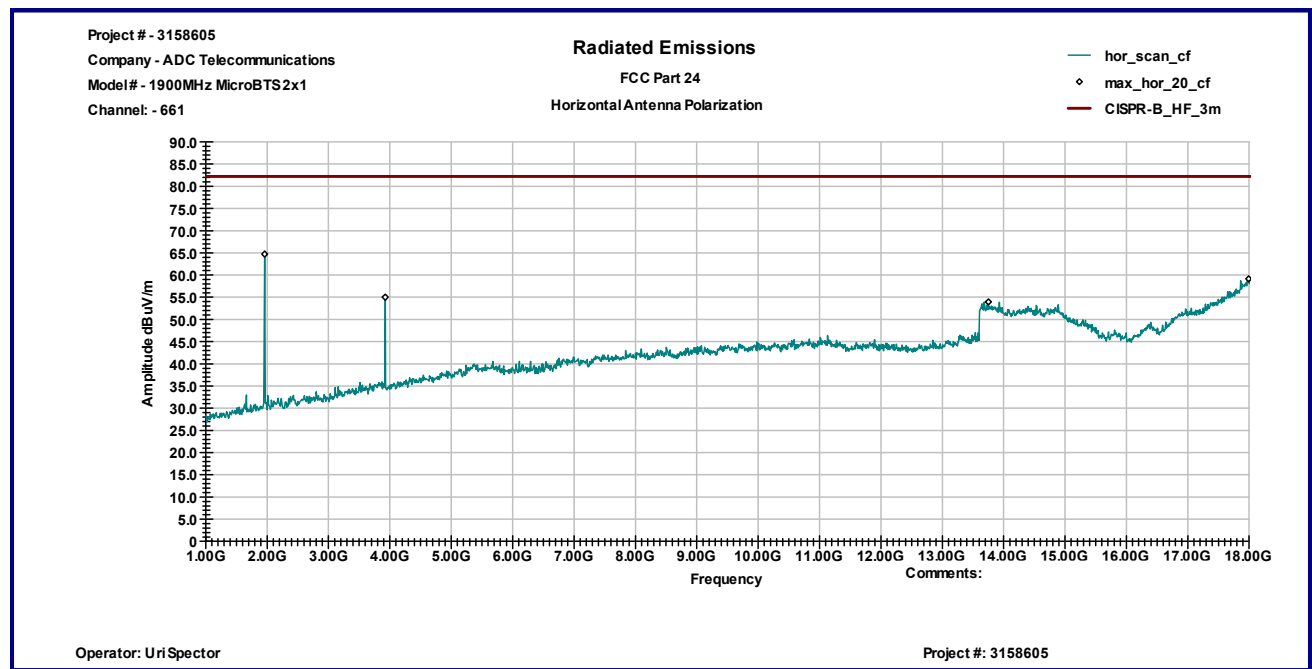
Graph 7



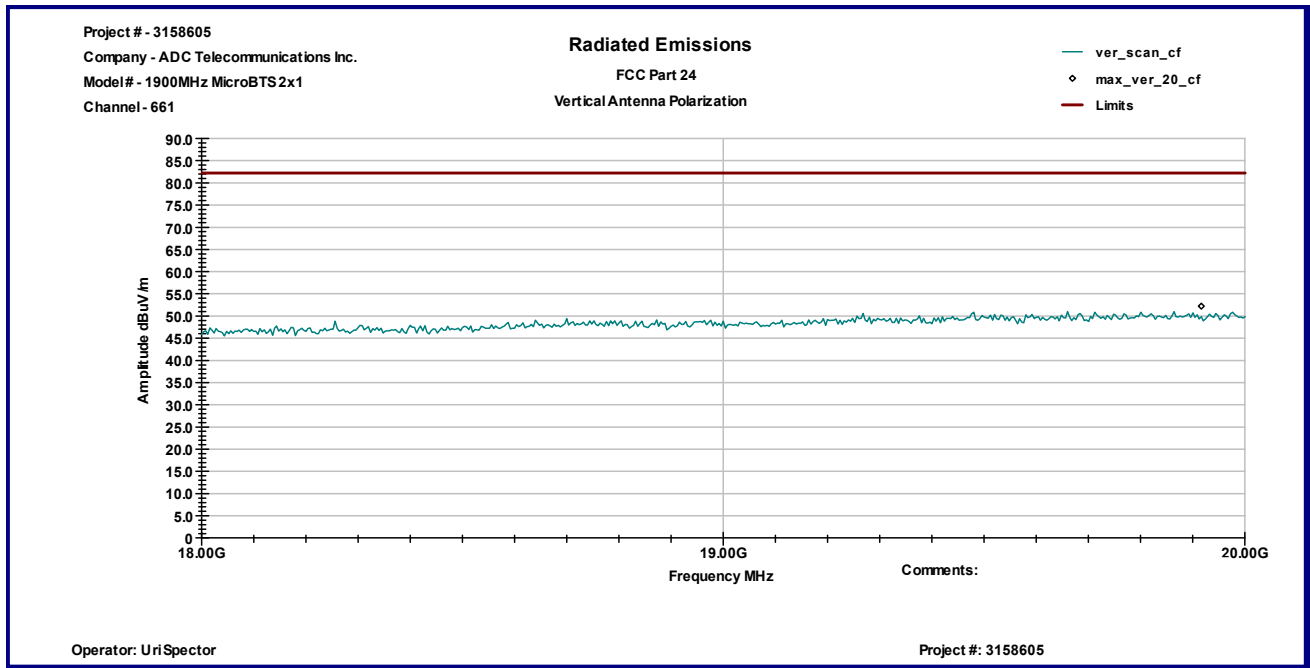
Graph 8



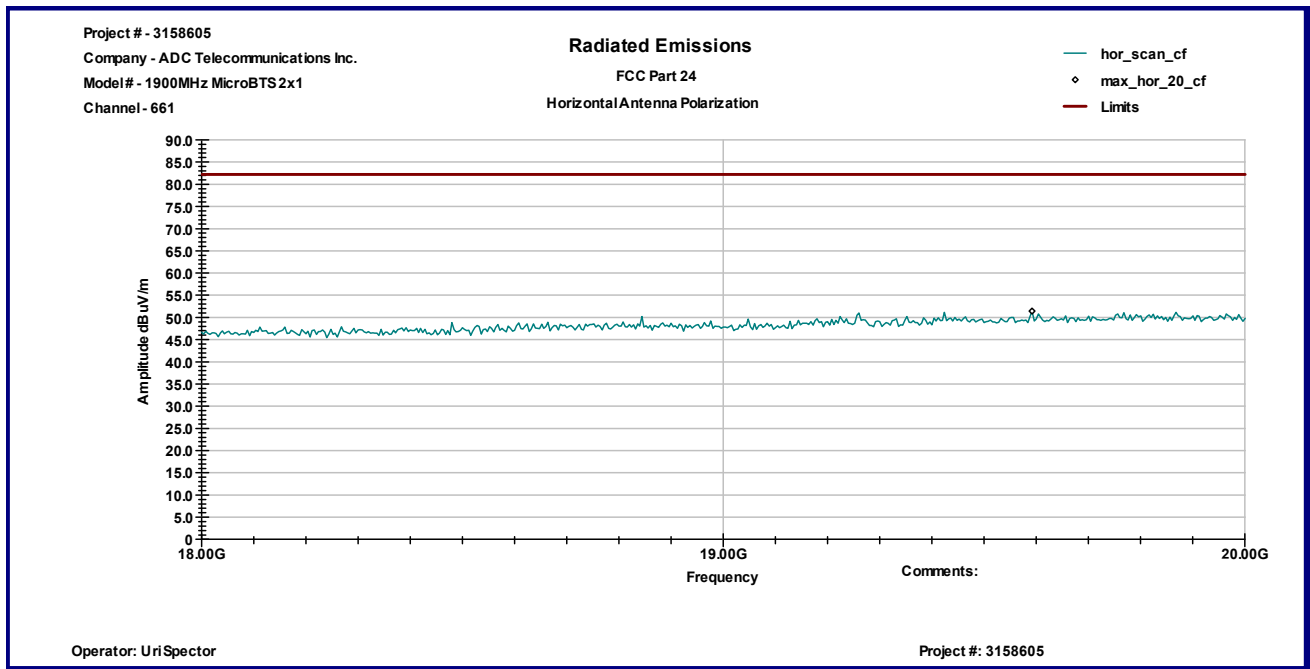
Graph 9



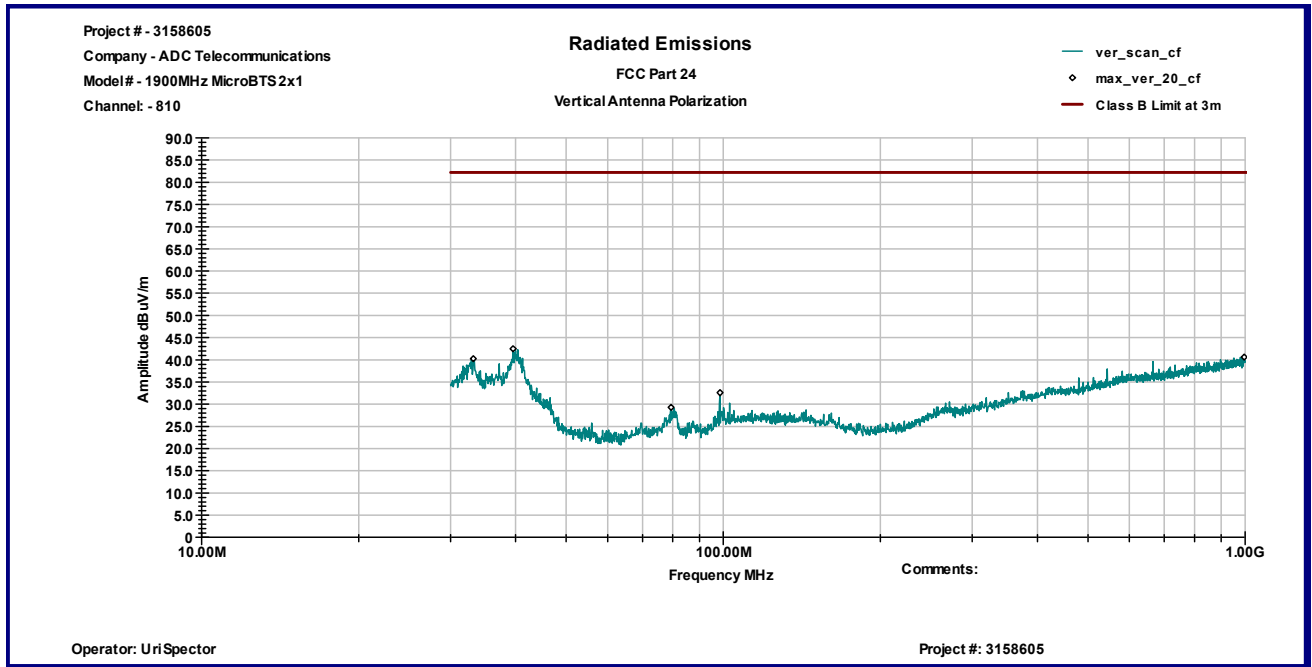
Graph 10



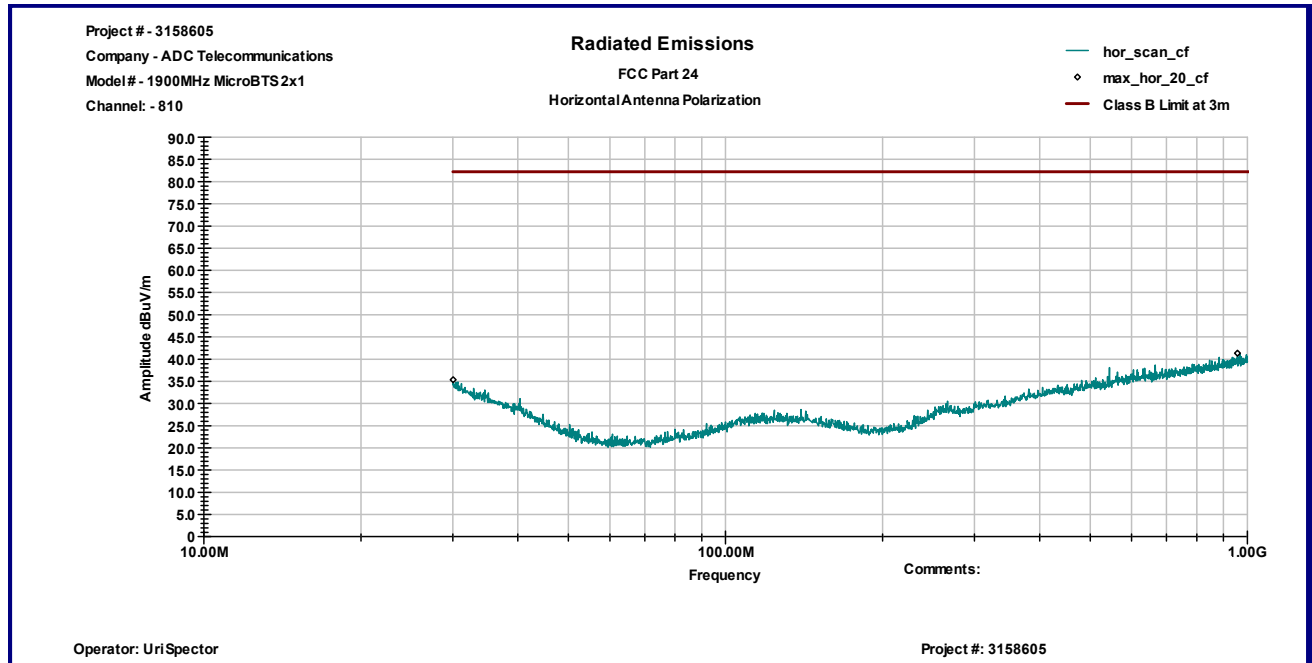
Graph 11



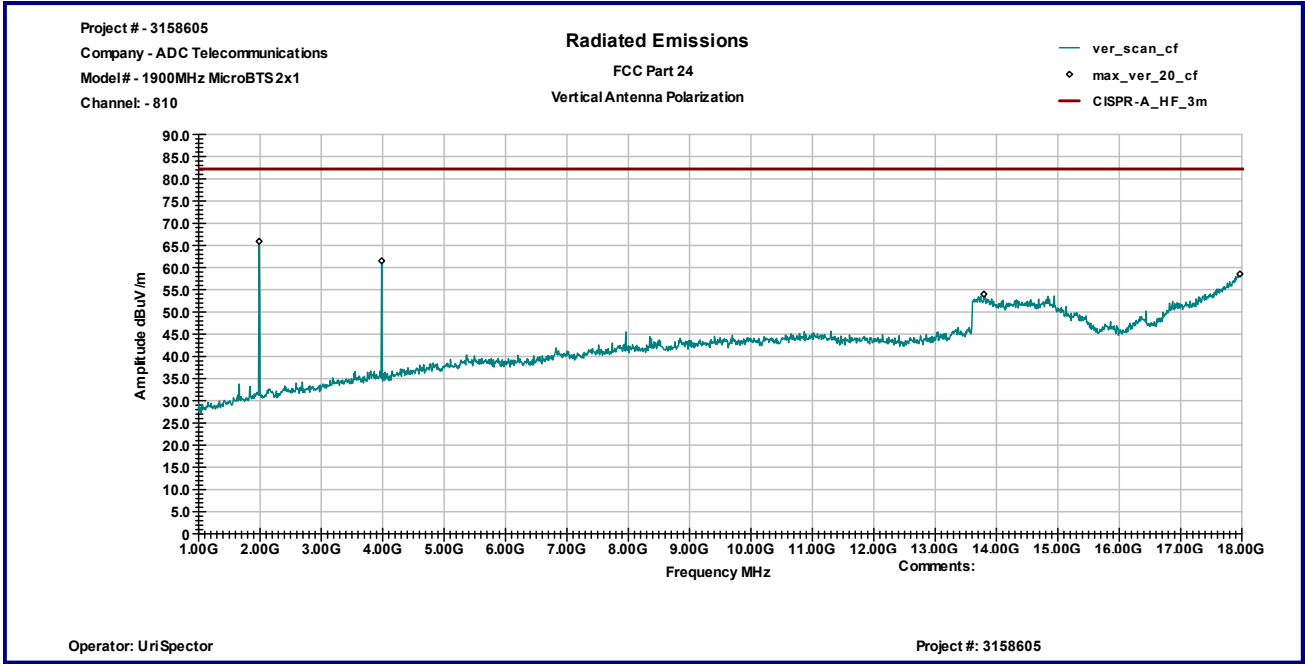
Graph 12



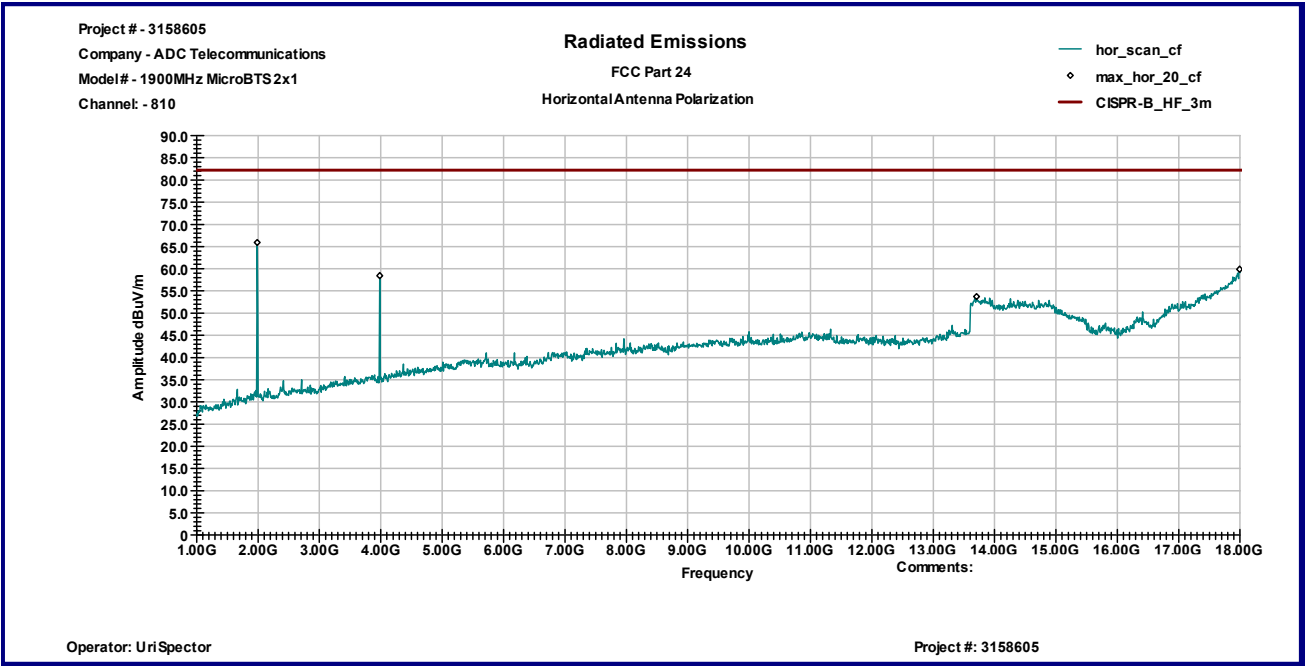
Graph 13



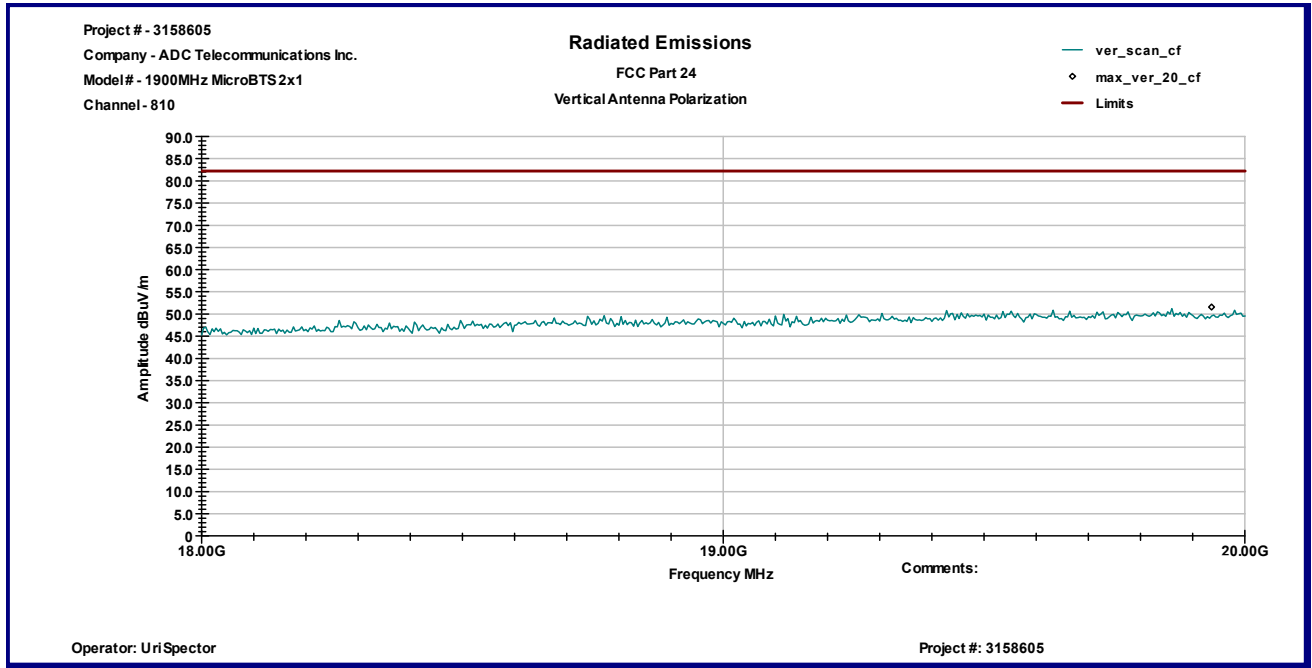
Graph 14



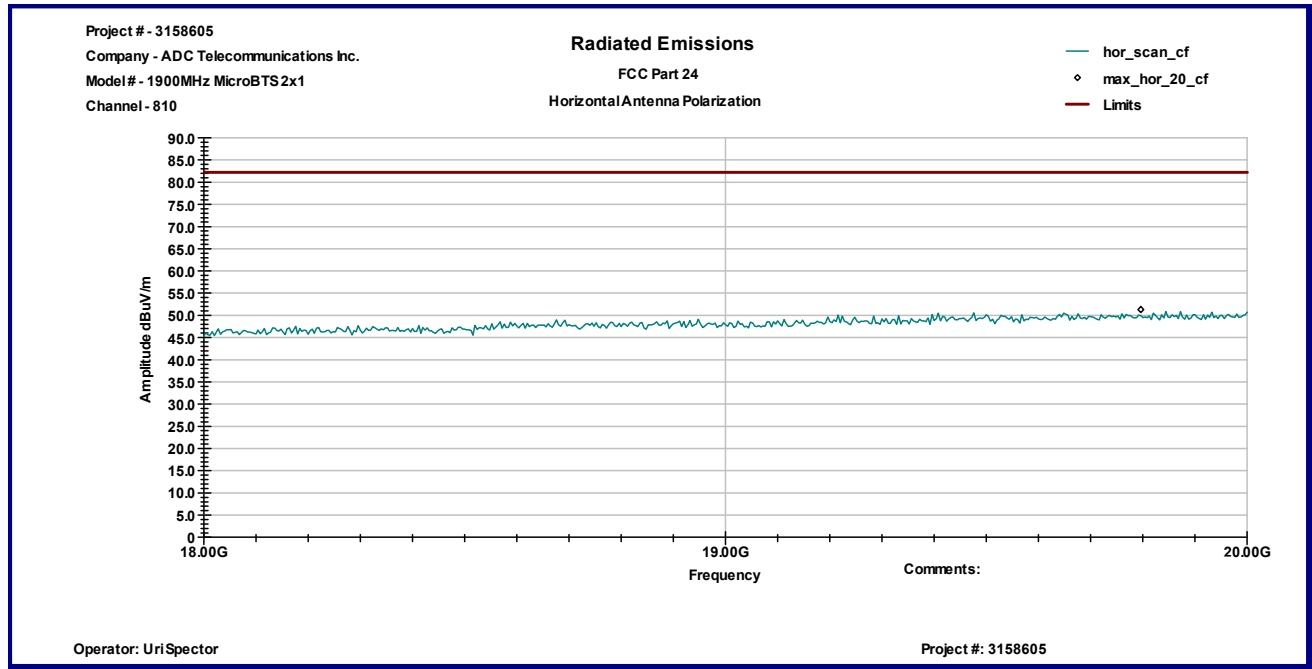
Graph 15



Graph 16



Graph 17



Graph 18

3.2 Environmental conditions

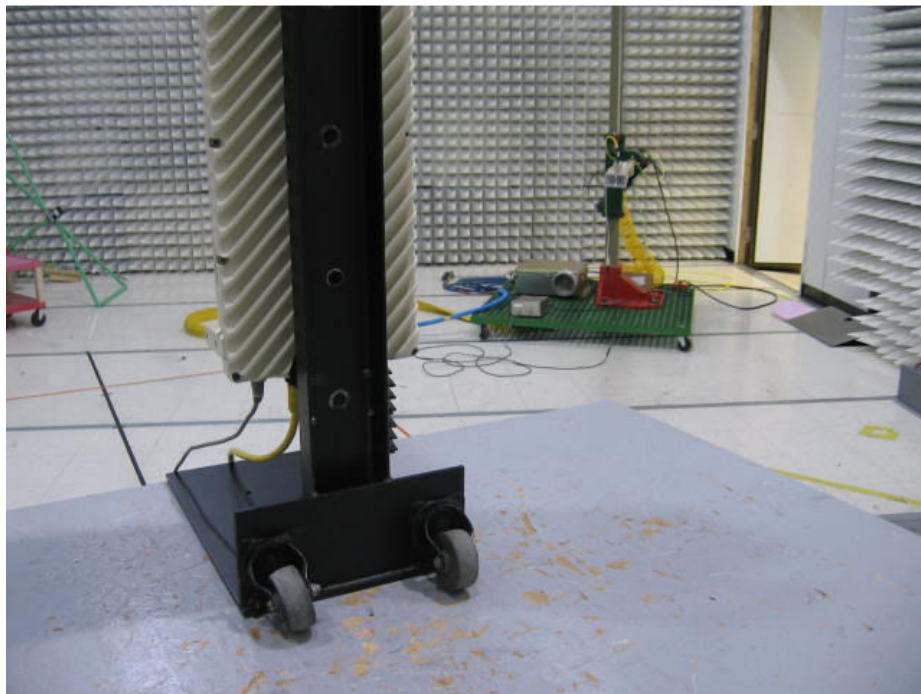
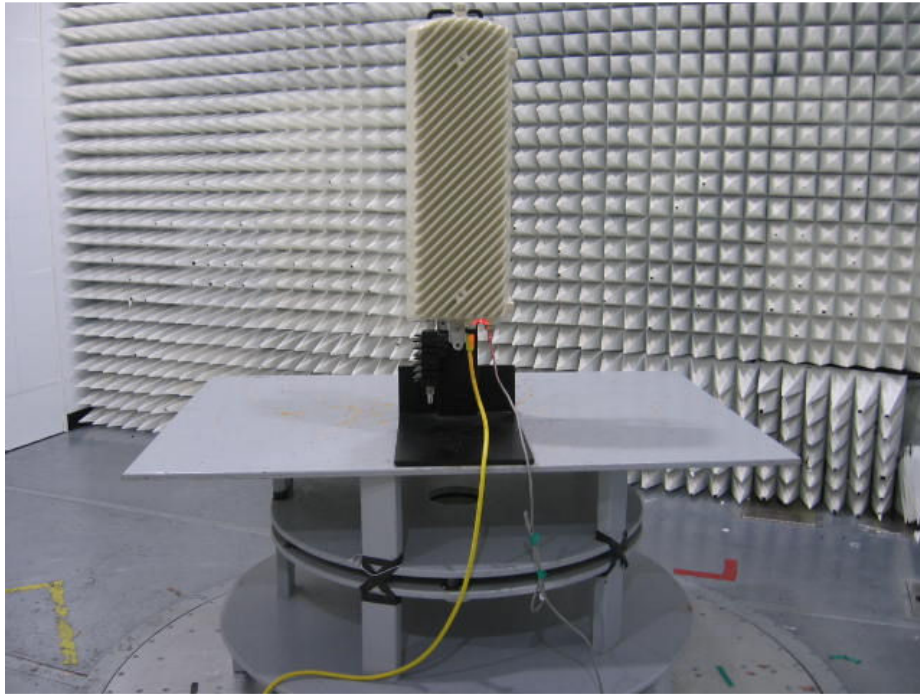
During the measurement the environmental conditions were within the listed ranges:

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 86-106 kPa

4.0 PHOTOS





5.0 TEST EQUIPMENT

DESCRIPTION	MANUFACTURER	MODEL	SERIAL NO.	CAL DUE	USED
Spectrum Analyzer	R & S	FSP 40	100024	08/23/2008	<input checked="" type="checkbox"/>
Spectrum Analyzer	R & S	ESCI	100358	05/07/2009	<input checked="" type="checkbox"/>
Bicono-Log Antenna	Schaffner-Chase	CBL 6112 B	2468	07/30/2008	<input checked="" type="checkbox"/>
Horn Antenna	EMCO	3115	9507-4513	02/13/2009	<input checked="" type="checkbox"/>
Waveguide Horn Antenna	EMCO	3116	9904-2423	07/20/2009	<input checked="" type="checkbox"/>
LISN	Fischer Custom Communications	FCC-LISN-2	316	09/24/2008	<input type="checkbox"/>
LISN	Fischer Custom Communications	FCC-LISN-50-25-2	2014	10/22/2008	<input type="checkbox"/>
Pre-Amplifier	MITEQ	AMF-5D-00501800-28-13P	1122951	04/28/2009	<input checked="" type="checkbox"/>
Pre-Amplifier	MITEQ	AMF-6F-16002600-25-10P	1222383	01/17/2009	<input checked="" type="checkbox"/>
System	TILE! Instrument Control		Ver. 3.4.K.29	VBU	<input checked="" type="checkbox"/>

