TEST DATA REPORT

Report Number: 100659876MIN-001
Project Number: G100659876

Testing performed on the
FWP - U4MT000MOD
to
47 CFR, Part 27:2010, Enclosure Spurious Radiated Emissions

For
ADC Telecommunications Inc. - a TE Connectivity Company

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

Test Authorized by:
ADC Telecommunications Inc.- a TE Connectivity Company
541 E Trimble Road
San Jose, CA 95131 USA

Prepared by: _____ Date: March 20, 2012
Simon Khazon

Reviewed by: _____ Date: March 20, 2012
Norman Shpilsher

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1.0 DESCRIPTION OF THE SAMPLE (EUT)

Model:	FWP - U4MT000MOD
Type of EUT:	700 Upper C Band MIMO
Frequency Range:	746-756MHz
Company:	ADC Telecommunications Inc. - a TE Connectivity Company
Customer:	Sue Cyr
Address:	541 E. Trimble Road San Jose, CA 95131 USA
Phone:	408-952-2445
Fax:	408-952-2645
e-mail:	sue.cyr@te.com
Test Standards:	☐ EN 55022:2006 +A1:2007, Class ☐ EN 55011:2007 +A2:2007, Group , Class ☒ 47 CFR, Part 27:2010, Enclosure Spurious Radiated Emissions ☐ ICES-003, Issue 4:2004 ☐ EN 55014-1:2006 ☐ EN 61326-1:2006 ☐ Class for Radiated and Conducted Emissions ☐ Basic Immunity Test Requirements ☐ Immunity Test Requirements for Industrial Locations ☐ EN 60601-1-2:2001 +A1:2006 ☐ EN 61000-6-3:2007 ☐ EN 61000-6-4:2007 ☐ EN 61000-3-2:2006 ☐ EN 61000-3-3:1995 +A1:2001 +A2:2006 ☐ EN 61000-6-1:2007 ☐ EN 61000-6-2:2005 ☐ EN 55024:1998 + A1:2001 + A2:2003
Date Sample Submitted:	March 19, 2012
Test Work Started:	March 19, 2012
Test Work Completed:	March 19, 2012
Test Sample Conditions:	☐ Damaged ☐Poor (Usable) ☒ Good ☐ Prototype ☒Production ☐ Used

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 27	Enclosure Spurious 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

3.0 EQUIPMENT UNDER TEST

3.1 Power Configuration

Rated voltage:	☒ 120VAC ☐ 230VAC ☐ 400VAC Supply ☐ Other:
Rated current:	Amp.
Rated frequency:	☐ 50Hz ☒ 60Hz
Number of phases:	☒ 1 Phase ☐ 3 Phases

3.2 EUT Configuration

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

☐ - Standby
☐ - Test program (H - Pattern)
☒ - Continuous Operation (see details below)
☐ - Specific test program
☐ -

Operating modes of the EUT:

No.	Description
1	Continuous transmission of RF signals at 747MHz, 751MHz, and 755MHz into two paths.
2	The EUT antenna ports were terminated.

Cables:

No.	Type	Length	Designation	Note
1	Two RF coax	10m each	RF signal cables to the Support Equipment	

Support equipment/Services:

No.	Item	Description
1	Agilent 8648B (located outside Test site)	Signal Generator
2	Prism Host Unit	
3	Prism Host 28VDC Power Supply	
4	30dB Attenuator (2)	

General notes: None

3.3 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 TEST CONDITIONS AND RESULTS

4.1 Enclosure Spurious Radiated Emissions

Description of the test location

Test location: ☐ OATS ☒ Anechoic Chamber

Test distance: ☐ 10 meters ☒ 3 meters

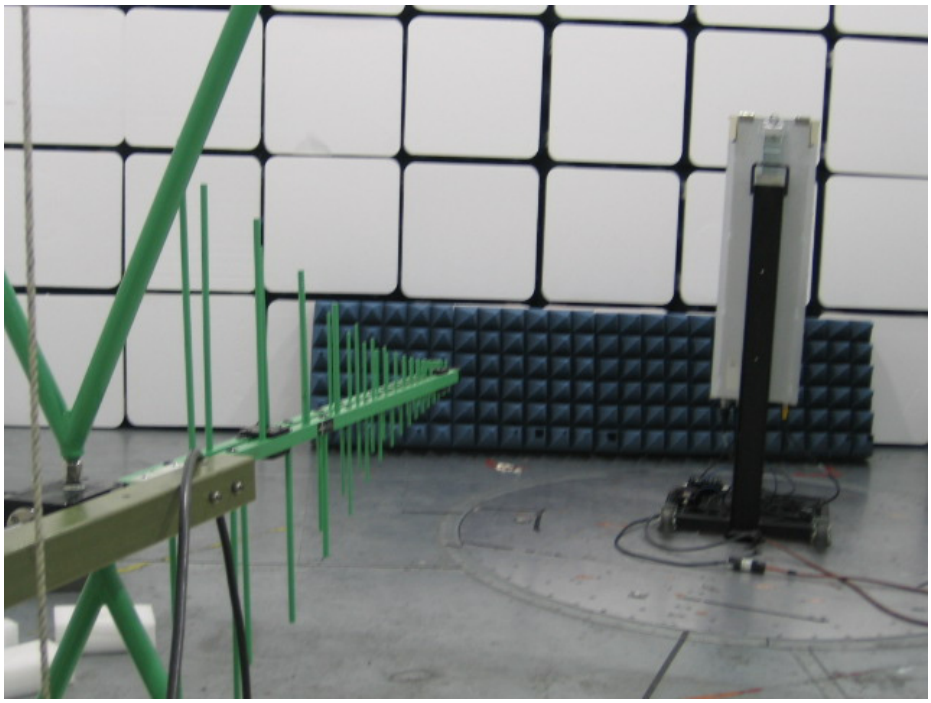
Test result: **Pass**

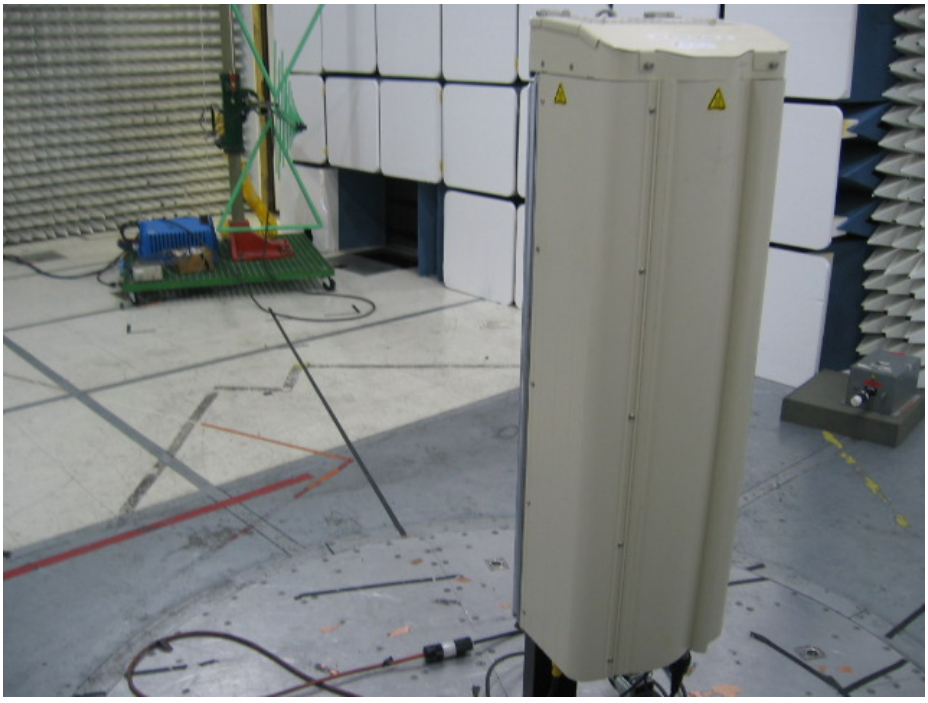
Frequency range: 30MHz-10GHz

Max. Emissions margin: 28.2.0dB below the Limits

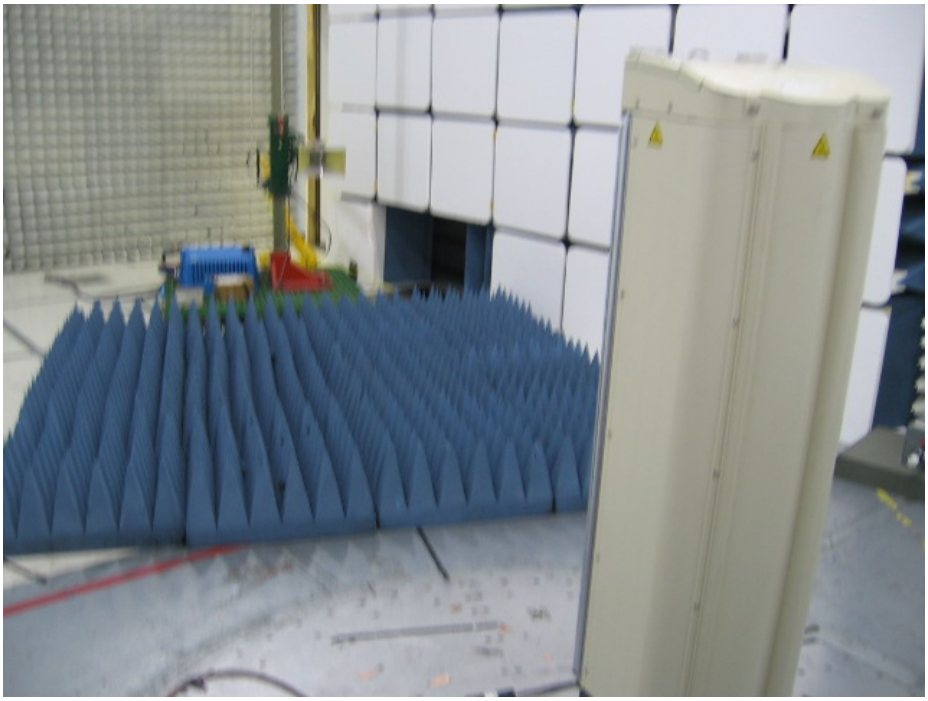
Notes:

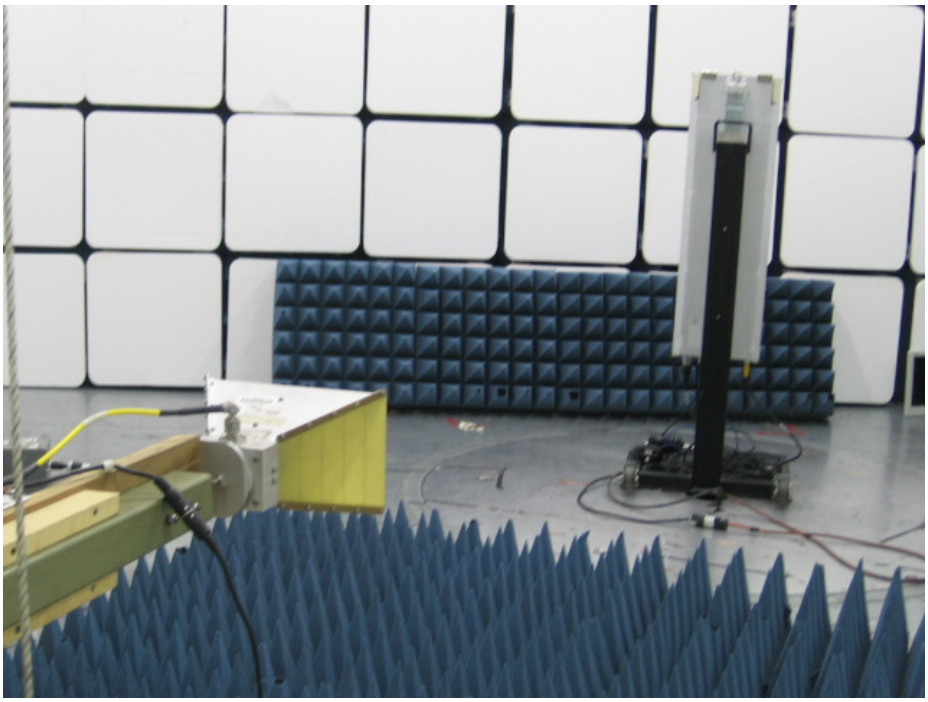
1. The Radiated Emissions testing was performed in the Anechoic chamber at 3m measurement distance (see Tables 1 and 2 and Graphs 1-12)
2. The Spurious Radiated Power limits of -13dBm was correlated with field strength Reference Limit of 82.2dBµV/m during field strength reference testing at 3m measurement distance (Graphs 1-12)
3. No emissions were chosen for substitution measurements as the maximum field strength emission is more than 20dB below the Reference Limit
4. Emissions at operating frequencies were excluded from the Tables





Test Setup Photos





Test Setup Photos

Date:	March 19, 2012	**Result:** **Pass**
Tested by:	Simon Khazon	
Standard:	FCC Part 27	
Test Point:	Enclosure	
Operation mode:	See page 5	
Note:	Frequency Range 30-1000MHz	

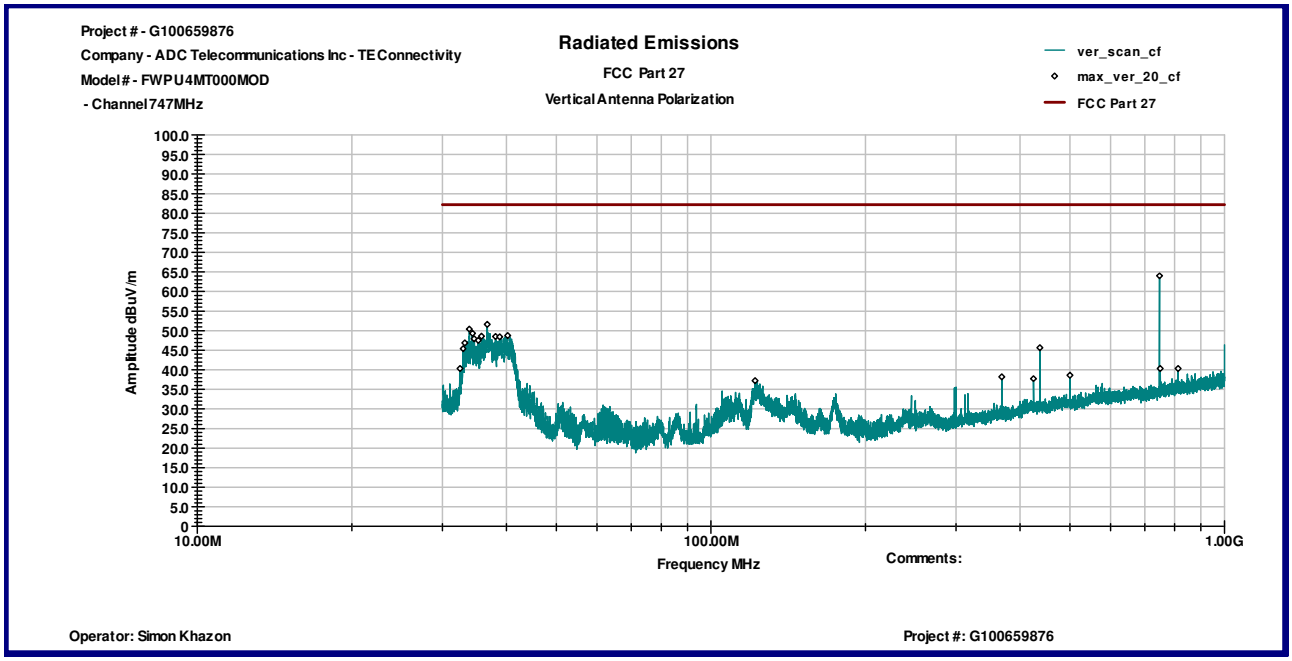
Table 1

Frequency	Ant. Polarity	Peak Reading dBµV	Ant.Factor dB1/m	Total at 3m dBµV/m	Limit dBµV/m	Margin dB
		Channel 747MHz				
33.868 MHz	V	32.2	18.2	50.4	82.2	-31.8
38.81 MHz	V	33.0	15.4	48.4	82.2	-33.8
40.189 MHz	V	34.1	14.6	48.7	82.2	-33.5
437.47 MHz	V	26.0	19.6	45.6	82.2	-36.6
749.99 MHz	V	16.6	23.8	40.3	82.2	-41.9
175.68 MHz	H	31.0	11.3	42.3	82.2	-39.9
437.54 MHz	H	23.2	19.6	42.8	82.2	-39.5
598.01 MHz	H	22.4	22.2	44.6	82.2	-37.6
750.0 MHz	H	21.2	23.8	45.0	82.2	-37.2
937.54 MHz	H	21.9	25.7	47.6	82.2	-34.6
		Channel 751MHz				
30.117 MHz	V	22.1	20.3	42.3	82.2	-39.9
40.178 MHz	V	30.4	14.6	45.0	82.2	-37.2
40.353 MHz	V	30.6	14.5	45.1	82.2	-37.1
250.05 MHz	V	30.0	14.7	44.7	82.2	-37.5
749.99 MHz	V	20.8	23.8	44.5	82.2	-37.7
175.5 MHz	H	32.5	11.3	43.8	82.2	-38.4
598.01 MHz	H	22.8	22.2	45.0	82.2	-37.2
609.4 MHz	H	16.2	22.4	38.6	82.2	-43.6
		Channel 755MHz				
33.844 MHz	V	23.0	18.2	41.2	82.2	-41.0
38.507 MHz	V	27.5	15.6	43.1	82.2	-39.1
250.05 MHz	V	28.2	14.7	42.9	82.2	-39.3
437.47 MHz	V	21.4	19.6	40.9	82.2	-41.3
749.99 MHz	V	20.8	23.8	44.6	82.2	-37.6
875.08 MHz	V	16.5	25.1	41.6	82.2	-40.6
174.64 MHz	H	31.2	11.3	42.5	82.2	-39.7
188.43 MHz	H	31.1	11.2	42.3	82.2	-39.9
437.54 MHz	H	22.9	19.6	42.5	82.2	-39.7
598.01 MHz	H	22.2	22.2	44.4	82.2	-37.8
750.0 MHz	H	20.5	23.8	44.2	82.2	-38.0
937.54 MHz	H	23.0	25.7	48.8	82.2	-33.4

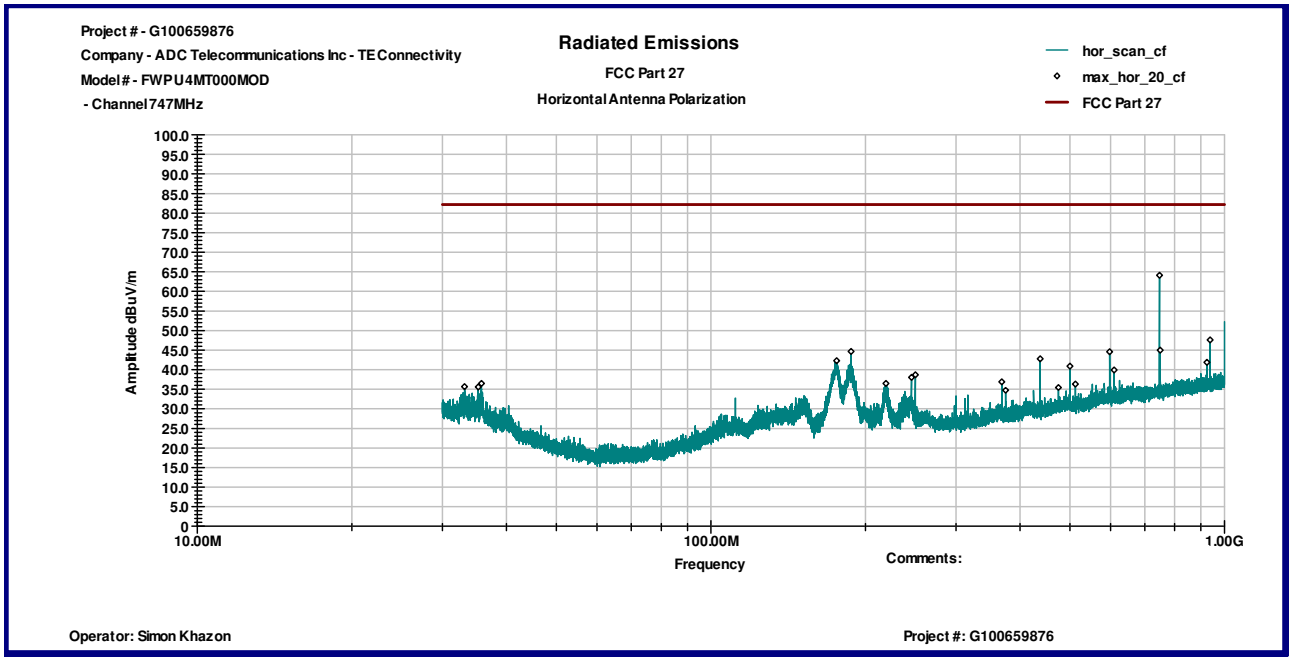
Date:	March 19, 2012	**Result: Pass**
Tested by:	Simon Khazon	
Standard:	FCC Part 27	
Test Point:	Enclosure	
Operation mode:	See page 5	
Note:	Frequency Range 1.0-10.0GHz	

Table 2

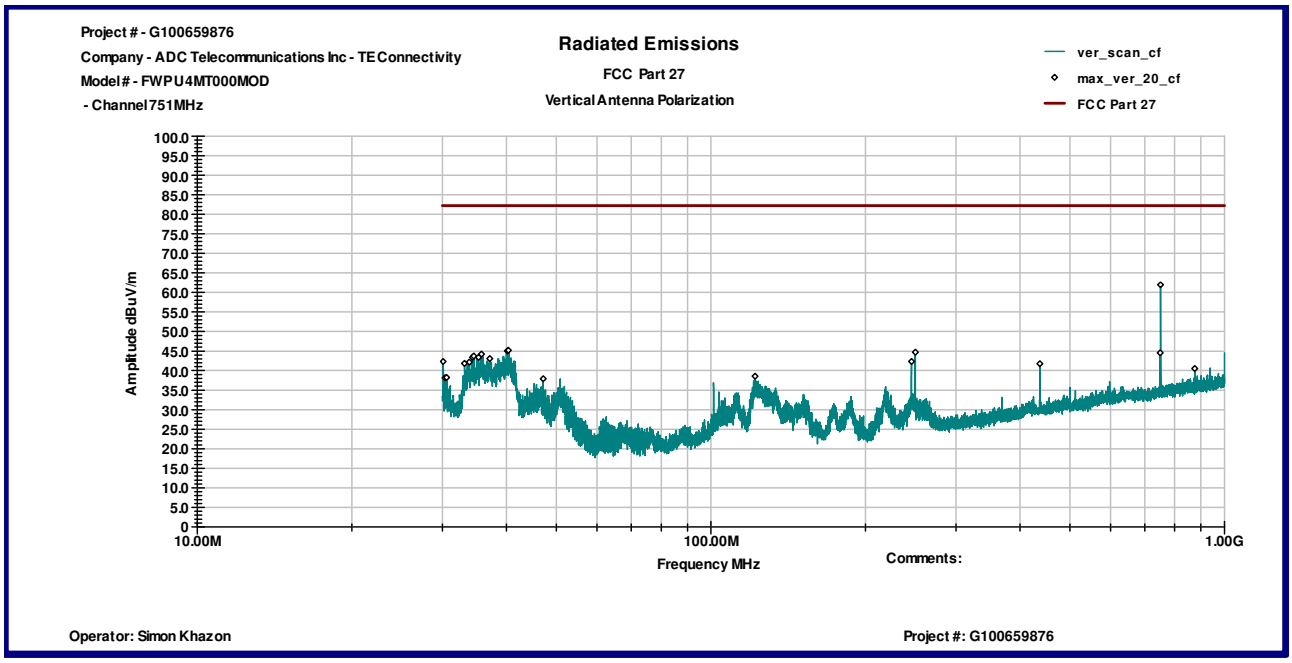
Frequency MHz	Antenna Polarity	Peak Reading dBµV	Total C.F. dB1/m	Pre-Amp. Gain (dB)	Total at 3m dBµV/m	Limit dBµV/m	Margin dB
		Channel 747MHz					
1.249 GHz	V	58.3	26.8	42.9	42.2	82.2	-40.0
2.113 GHz	V	61.4	30.6	43.5	48.4	82.2	-33.8
2.989 GHz	V	55.9	33.5	43.8	45.6	82.2	-36.6
4.03 GHz	V	52.0	36.6	43.0	45.6	82.2	-36.6
8.956 GHz	V	43.9	43.4	40.3	47.0	82.2	-35.2
1.249 GHz	H	67.4	26.7	42.9	51.2	82.2	-31.0
2.113 GHz	H	66.9	30.5	43.5	53.8	82.2	-28.4
2.989 GHz	H	59.2	33.3	43.8	48.7	82.2	-33.5
3.589 GHz	H	55.3	35.2	43.5	47.0	82.2	-35.2
4.186 GHz	H	51.0	36.6	42.7	44.8	82.2	-37.4
9.349 GHz	H	44.4	43.7	40.6	47.5	82.2	-34.7
		Channel 751MHz					
2.113 GHz	V	61.8	30.6	43.5	48.8	82.2	-33.4
2.467 GHz	V	56.4	31.6	43.5	44.5	82.2	-37.7
3.004 GHz	V	55.1	33.6	43.8	44.9	82.2	-37.3
9.073 GHz	V	44.2	43.5	40.4	47.4	82.2	-34.9
1.249 GHz	H	67.8	26.7	42.9	51.6	82.2	-30.6
1.936 GHz	H	59.7	29.8	43.5	46.1	82.2	-36.1
2.113 GHz	H	66.7	30.5	43.5	53.7	82.2	-28.5
3.004 GHz	H	59.4	33.4	43.8	48.9	82.2	-33.3
3.589 GHz	H	54.1	35.2	43.5	45.9	82.2	-36.3
9.631 GHz	H	44.2	44.0	40.9	47.2	82.2	-35.0
		Channel 755MHz					
1.249 GHz	V	59.0	26.77	42.9	42.9	82.2	-39.3
2.113 GHz	V	62.1	30.55	43.5	49.1	82.2	-33.1
2.467 GHz	V	57.3	31.62	43.5	45.5	82.2	-36.7
4.03 GHz	V	50.7	36.57	43.0	44.3	82.2	-37.9
9.481 GHz	V	43.9	43.81	40.8	47.0	82.2	-35.2
1.249 GHz	H	67.9	26.69	42.9	51.7	82.2	-30.6
1.51 GHz	H	62.5	27.7	43.0	47.2	82.2	-35.0
2.113 GHz	H	67.1	30.47	43.5	54.0	82.2	-28.2
3.019 GHz	H	59.4	33.42	43.8	49.0	82.2	-33.2
3.589 GHz	H	53.6	35.2	43.5	45.4	82.2	-36.8
9.625 GHz	H	44.3	44.0	40.9	47.4	82.2	-34.8



Graph 1



Graph 2



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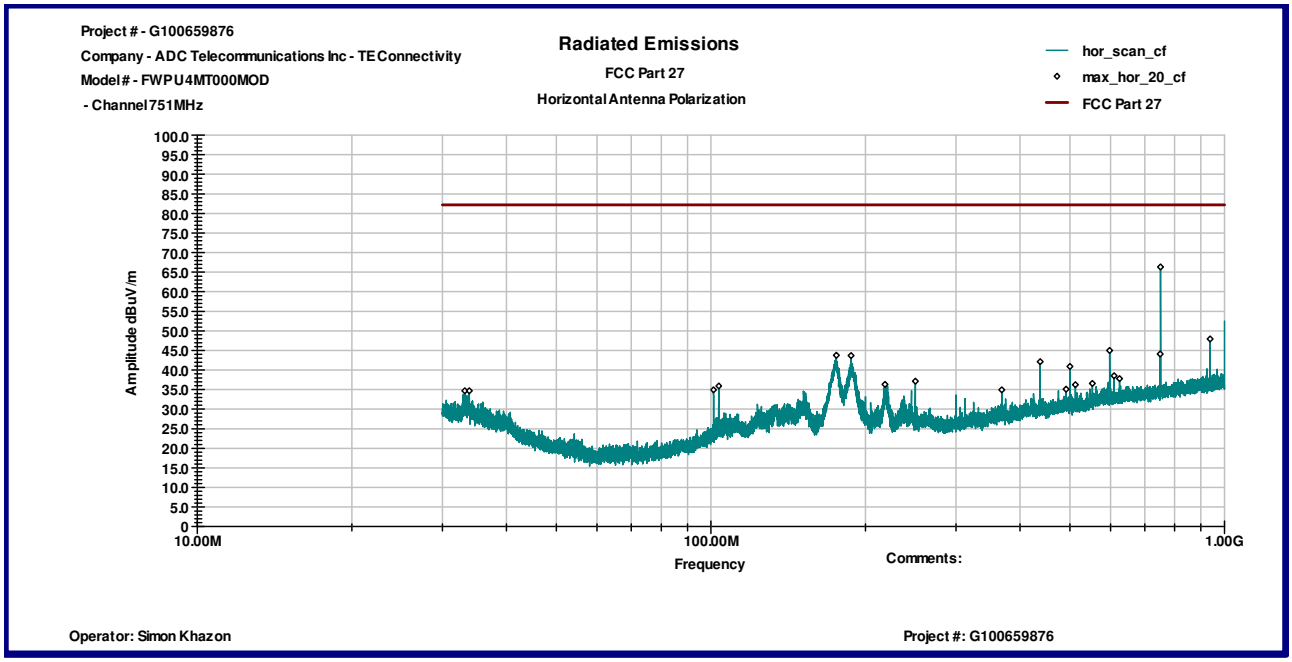
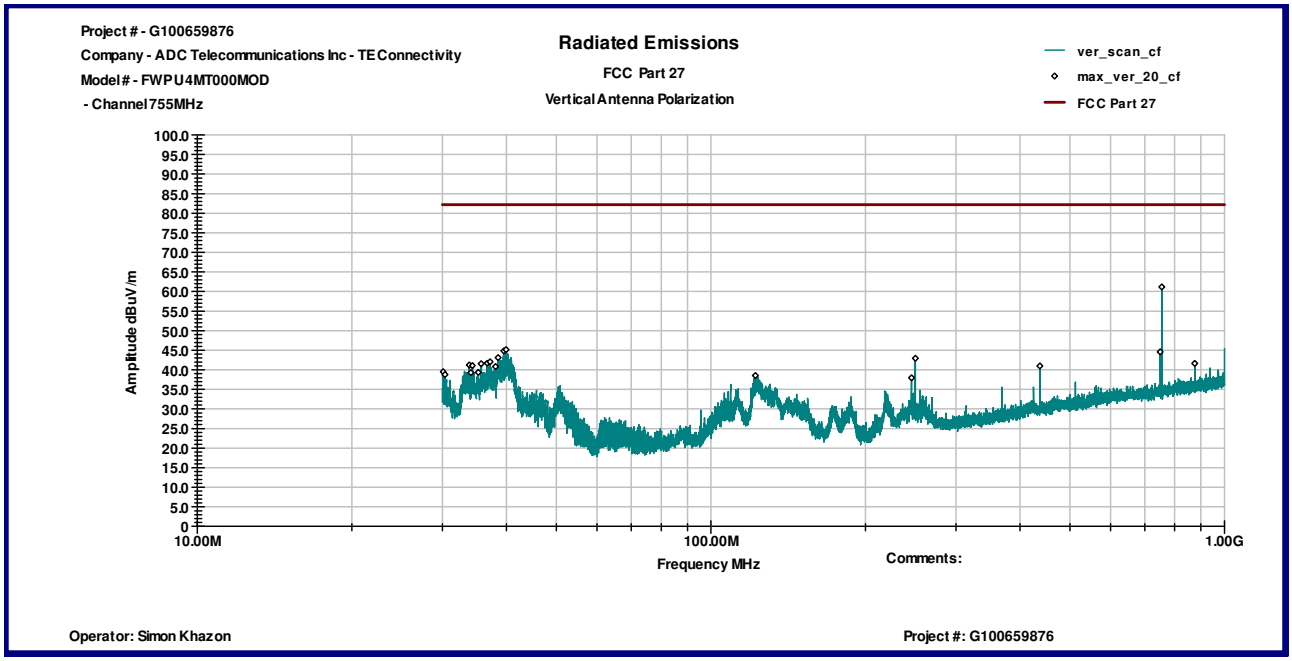


Graph 4



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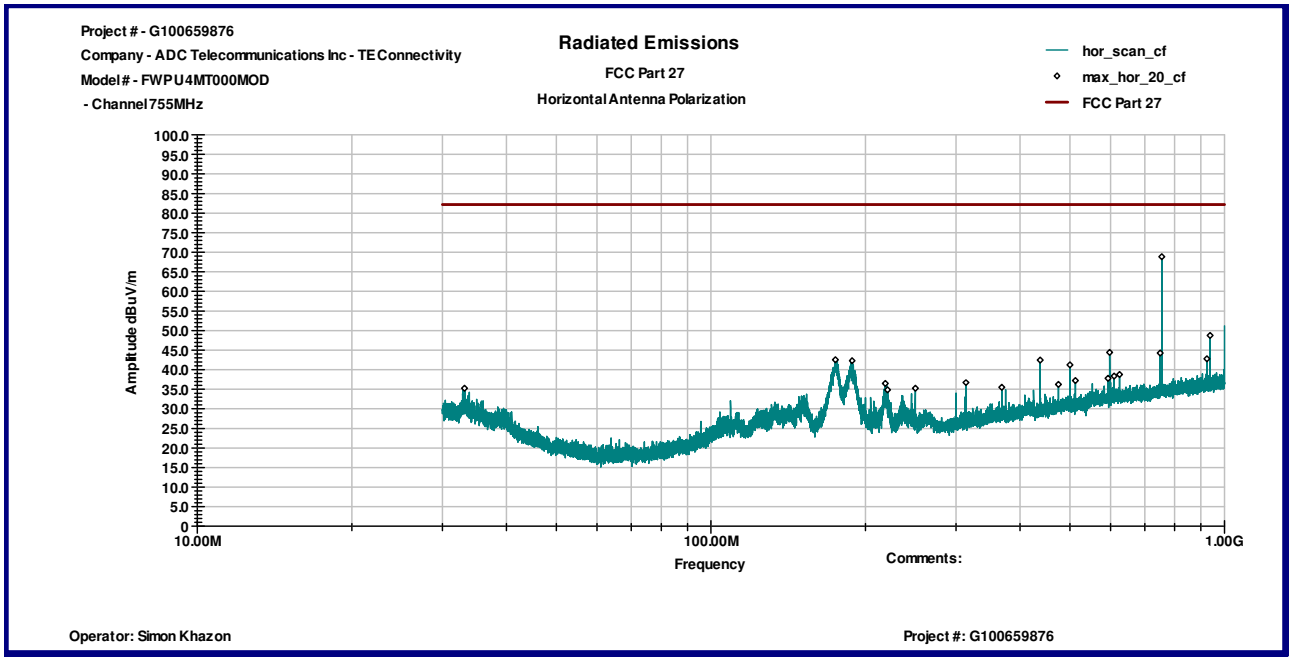
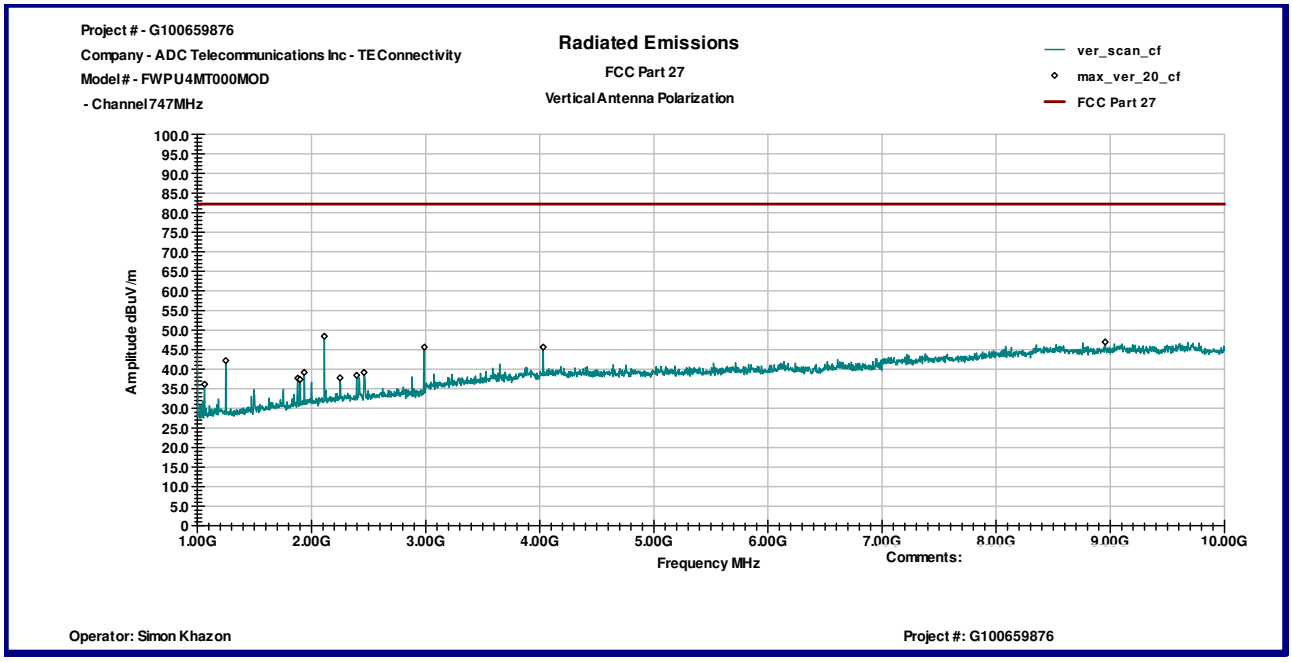
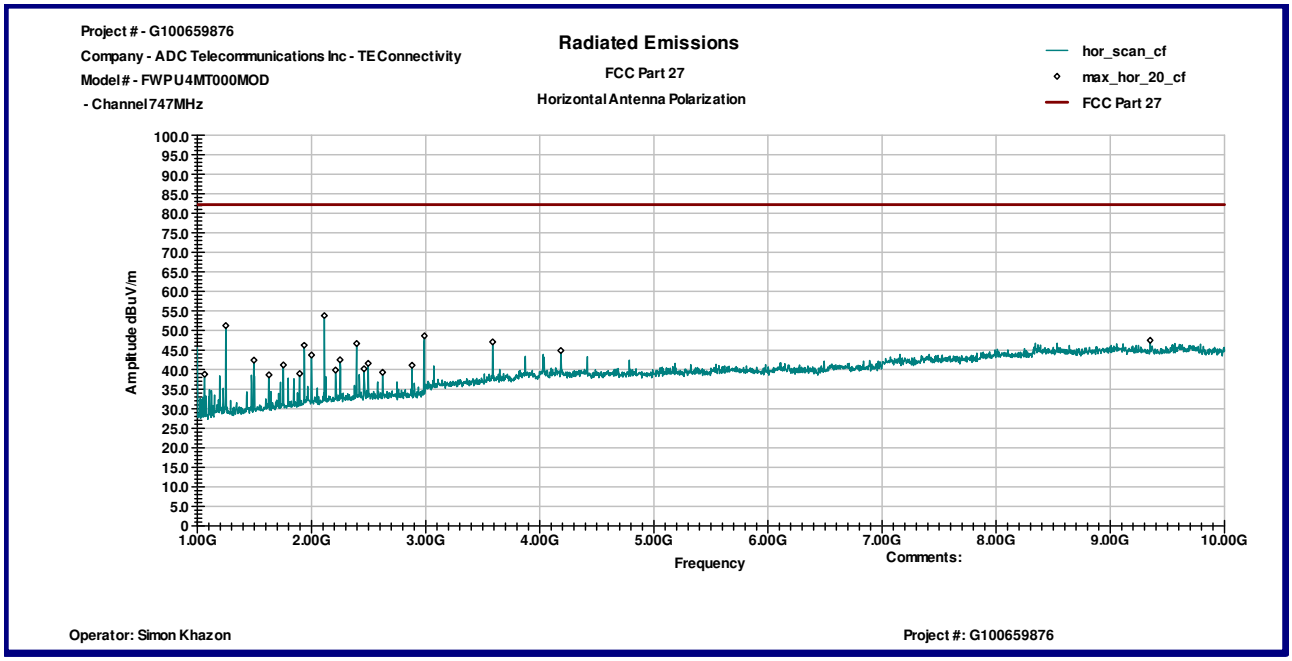


Graph 6



Graph 7



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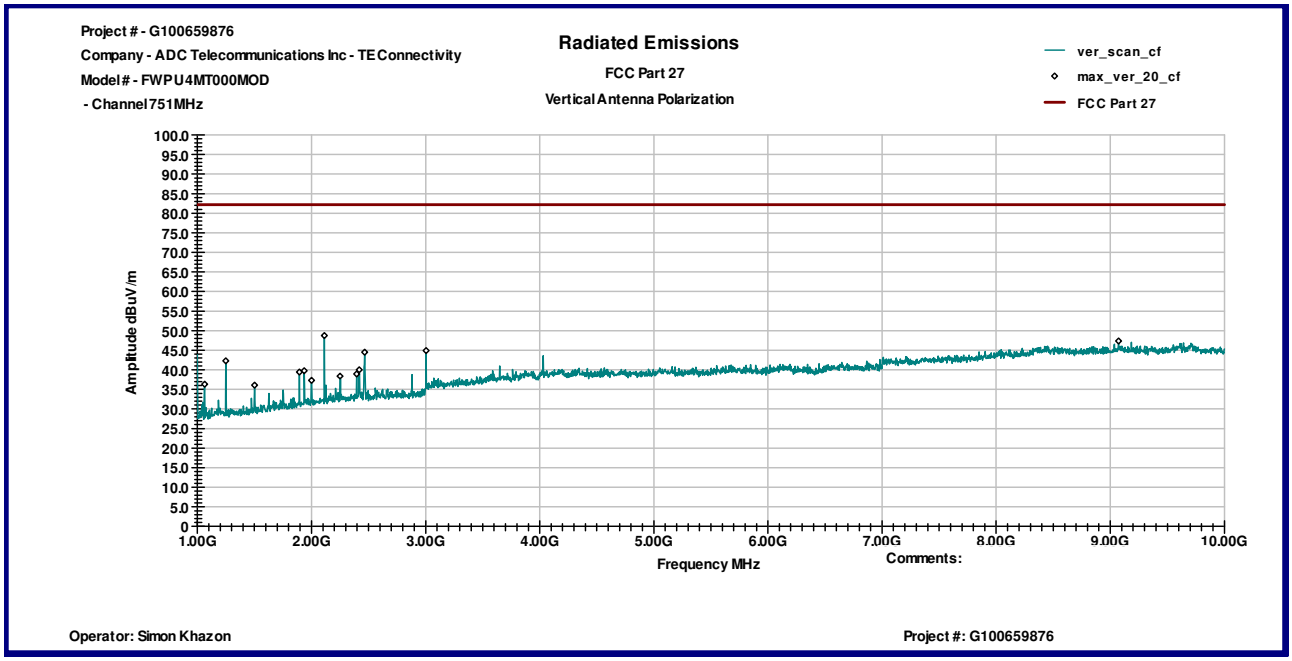

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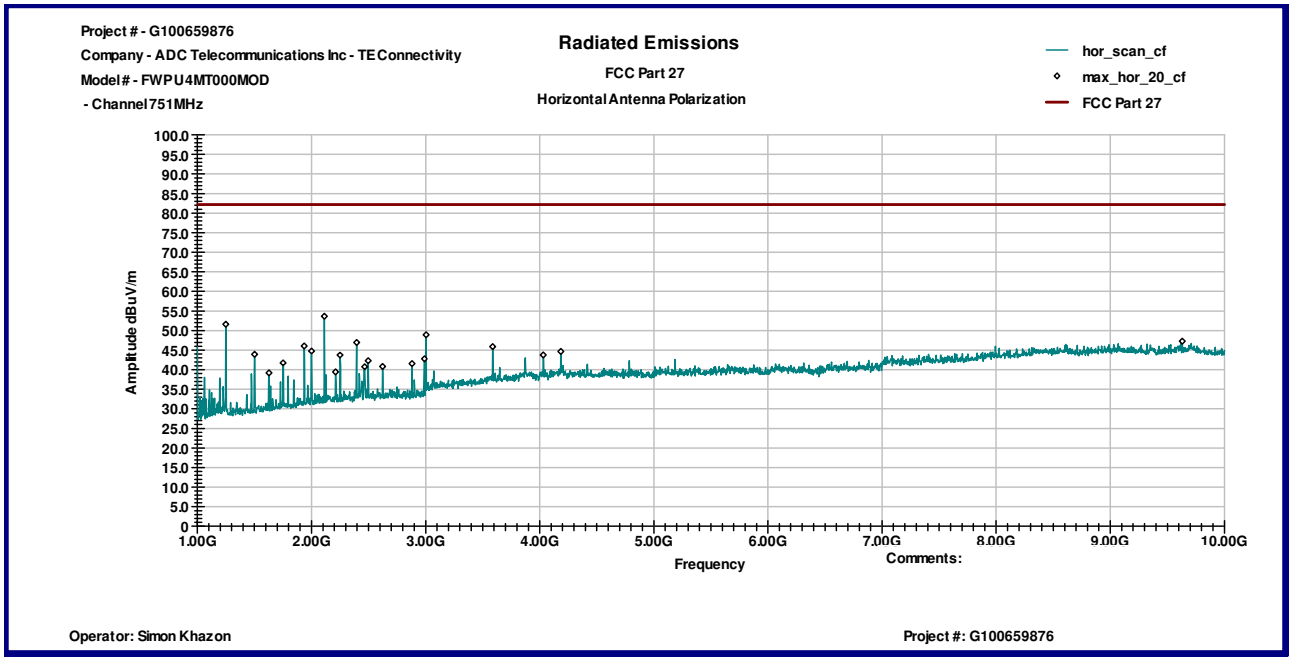

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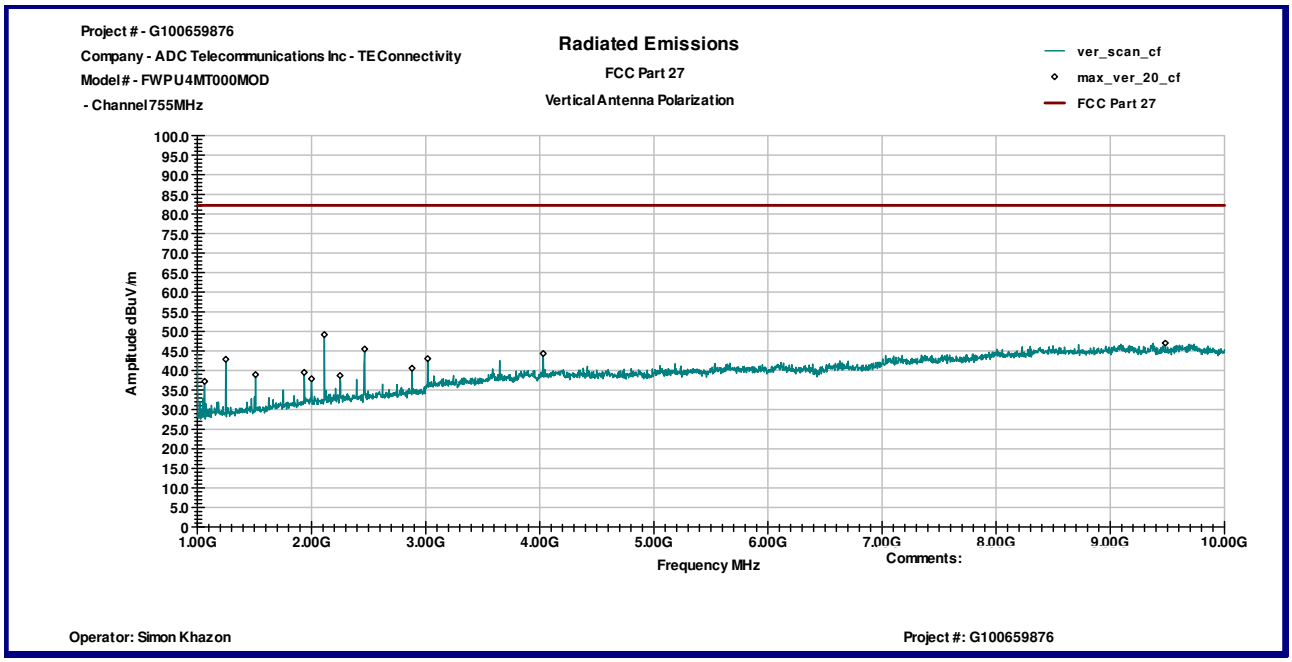

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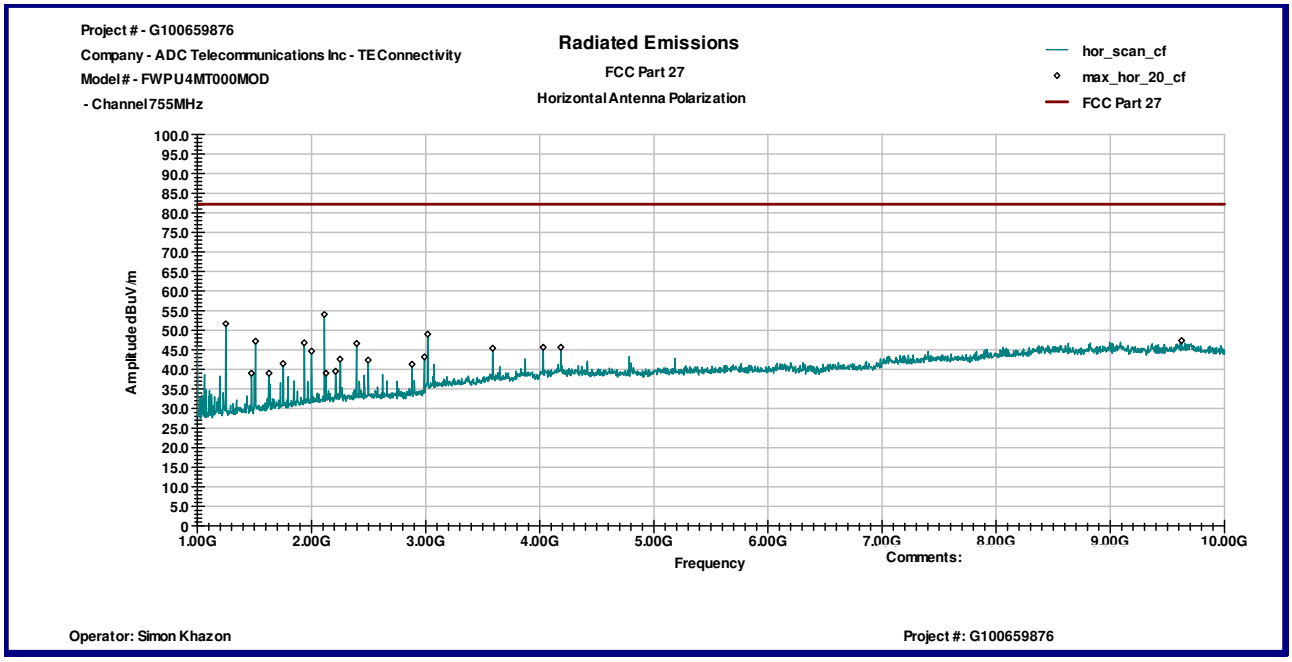

Graph 12

5.0 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	6579	15580	05/25/2012	☒
Pre-Amplifier	MITEQ	AMF-5D-00501800-28-13P	1402232	172081	10/31/2012	☒
System	Quantum Change	TILE! Instrument Control	Ver. 3.4.K.29	15259	VBU	☒