

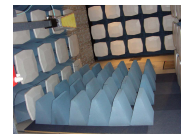


PCTEST ENGINEERING LABORATORY, INC.

6660-B Dobbin Road, Columbia, MD 21045 USA

Tel. 410.290.6652 / Fax 410.290.6554

<http://www.pctestlab.com>



MEASUREMENT REPORT

FCC Part 22 & 24 / IC RSS-129/RSS-133

Applicant Name:

Elster Solutions, LLC
208 S. Rogers Lane
Raleigh, NC 27610
United States

Date of Testing:

April 15, 2010

Test Site/Location:

PCTEST Lab., Columbia, MD, USA

Test Report Serial No.:

0Y1004120622.QZC

FCC ID:

QZCWWIC-C01

IC CERTIFICATION NO.: 4557A-WWICC01**APPLICANT:**

ELSTER SOLUTIONS, LLC

Application Type:

Class II Permissive Change

FCC Classification:

PCS Licensed Transmitter (PCB)

FCC Rule Part(s):

§2; §22(H), §24(E)

IC Specification(s):

RSS-129 Issue 2; RSS-133 Issue 5

EUT Type:

A3 Alpha Meter with CDMA Wireless WIC and 900MHz LAN

Model(s):

EA_Gatekeeper with Wireless WIC

Tx Frequency Range:

824.70 - 848.31MHz (Cell. CDMA) / 1851.25 - 1908.75MHz (PCS CDMA)

Max. RF Output Power:

24.23 dBm Conducted (Cell. CDMA), 23.05 dBm Conducted (PCS CDMA)

Emission Designator(s):

1M28F9W (CDMA) / 1M28F9W (PCS)

Test Device Serial No.:

identical prototype [S/N: 11818738]

Class II Permissive Change:

Please See Change Document

Original Grant Date:

February 18, 2010

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Grant Conditions: Power output listed is conducted for Part 22 and Part 24.

PCTEST certifies that no party to this application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862.


Randy Ortanez
President



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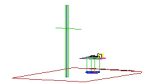
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MEASUREMENT REPORT

FCC Part 22 & 24

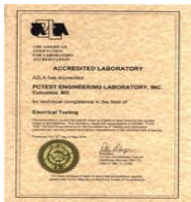


§2.1033 General Information

APPLICANT: Elster Solutions, LLC
APPLICANT ADDRESS: 208 S. Rogers Lane
 Raleigh, NC 27610, United States
TEST SITE: PCTEST ENGINEERING LABORATORY, INC.
TEST SITE ADDRESS: 6660-B Dobbin Road, Columbia, MD 21045 USA
FCC RULE PART(S): §2; §22(H), §24(E)
IC SPECIFICATION(S): RSS-129 Issue 2; RSS-133 Issue 5
BASE MODEL: EA_Gatekeeper with Wireless WIC
FCC ID: QZCWWIC-C01
FCC CLASSIFICATION: PCS Licensed Transmitter (PCB)
EMISSION DESIGNATOR(S): 1M28F9W (CDMA) / 1M28F9W (PCS)
MODE: CDMA
FREQUENCY TOLERANCE: $\pm 0.00025\%$ (2.5 ppm)
Test Device Serial No.: 11818738 ☐ Production ☒ Pre-Production ☐ Engineering
DATE(S) OF TEST: April 15, 2010
TEST REPORT S/N: 0Y1004120622.QZC

Test Facility / Accreditations

Measurements were performed at PCTEST Engineering Lab. located in Columbia, MD 21045, U.S.A.



- PCTEST facility is an FCC registered (PCTEST Reg. No. 90864) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules and Industry Canada (2451A-1).
- PCTEST Lab is accredited to ISO 17025 by U.S. National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP Lab code: 100431-0) in EMC, FCC and Telecommunications.
- PCTEST Lab is accredited to ISO 17025:2005 by the American Association for Laboratory Accreditation (A2LA) in Specific Absorption Rate (SAR) testing, Hearing Aid Compatibility (HAC) testing, CTIA Test Plans, and wireless testing for FCC and Industry Canada Rules.
- PCTEST Lab is a recognized U.S. Conformity Assessment Body (CAB) in EMC and R&TTE (n.b. 0982) under the U.S.-EU Mutual Recognition Agreement (MRA).
- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC Guide 65 by the American National Standards Institute (ANSI) in all scopes of FCC Rules and Industry Canada Standards (RSS).
- PCTEST facility is an IC registered (2451A-1) test laboratory with the site description on file at Industry Canada.
- PCTEST is a CTIA Authorized Test Laboratory (CATL) for AMPS, CDMA, and EvDO wireless devices and for Over-the-Air (OTA) Antenna Performance testing for AMPS, CDMA, GSM, GPRS, EGPRS, UMTS (W-CDMA), CDMA 1xEVDO, and CDMA 1xRTT.

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1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2 Testing Facility

The map below shows the location of the PCTEST LABORATORY, its proximity to the FCC Laboratory, the Columbia vicinity area, the Baltimore-Washington Intern't'l (BWI) airport, the city of Baltimore and the Washington, DC area. (See Figure 1-1).

These measurement tests were conducted at the PCTEST Engineering Laboratory, Inc. facility in New Concept Business Park, Guilford Industrial Park, Columbia, Maryland. The site address is 6660-B Dobbin Road, Columbia, MD 21045. The test site is one of the highest points in the Columbia area with an elevation of 390 feet above mean sea level. The site coordinates are 39° 11'15" N latitude and 76° 49'38" W longitude. The facility is 1.5 miles North of the FCC laboratory, and the ambient signal and ambient signal strength are approximately equal to those of the FCC laboratory. There are no FM or TV transmitters within 15 miles of the site. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2003 on January 28, 2009.

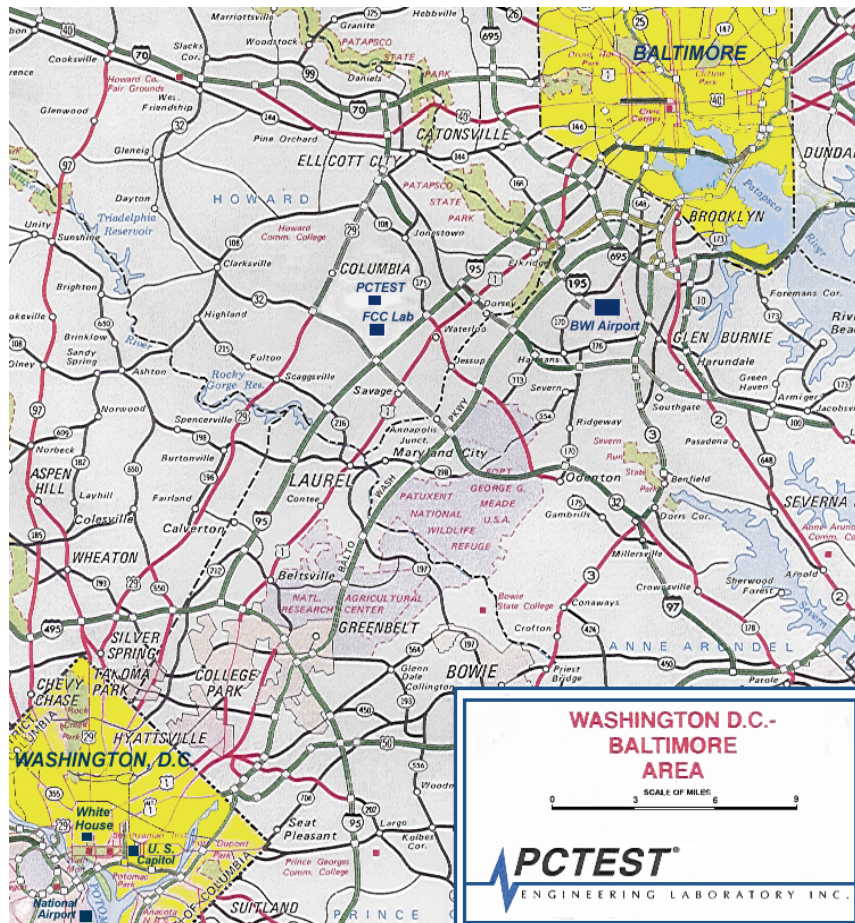


Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Elster A3 Alpha Meter with CDMA Wireless WIC and 900MHz LAN FCC ID: QZCWWIC-C01**. The EUT consisted of the following component(s):

Trade Name / Base Model	FCC ID	Description
Elster / Model: EA_Gatekeeper with Wireless WIC	QZCWWIC-C01	A3 Alpha Meter with CDMA Wireless WIC and 900MHz LAN

Table 2-1. EUT Equipment Description

Note: This device was tested with a 3dBi external antenna.

2.2 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

2.3 Labeling Requirements

Per 2.925

The FCC identifier shall be permanently affixed to the equipment and shall be readily visible to the purchaser at the time of purchase.

Per 15.19; Docket 95-19

In addition to this requirement, a device subject to certification shall be labeled as follows:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the trade name and FCC ID must be displayed on the device per Section 15.19(b)(2).

Please see attachment for FCC ID label and label location.

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3.0 DESCRIPTION OF TESTS

3.1 Measurement Procedure

The radiated spurious measurements were made outdoors at a 3-meter test range (See Figure 3-1). The equipment under test is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. This power level was recorded using a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This level is recorded with the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic antenna are taken into consideration.

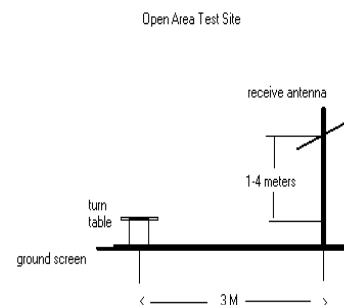
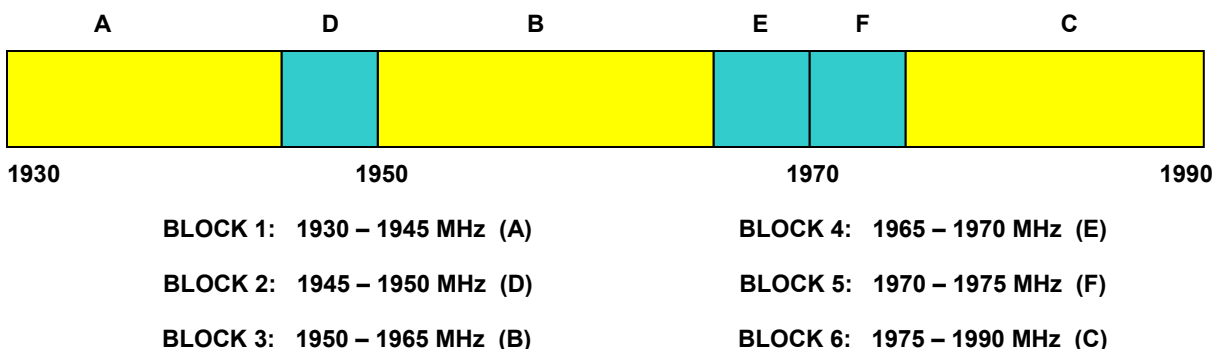


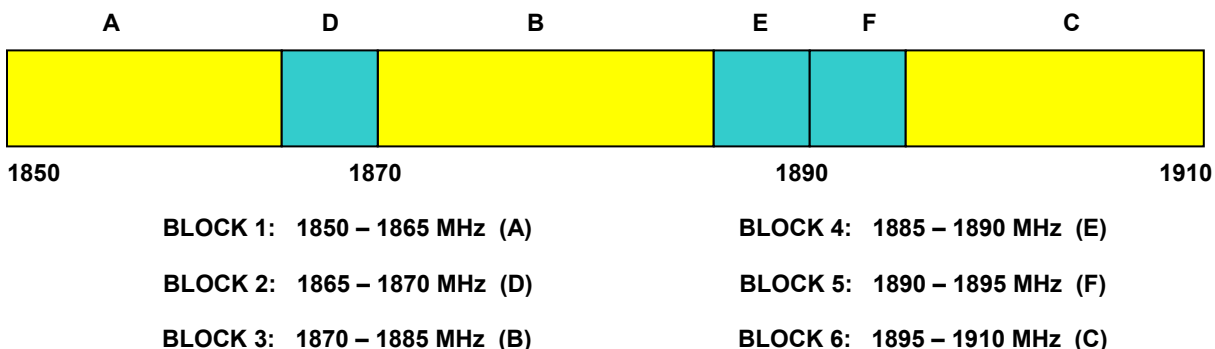
Figure 3-1. Diagram of 3-meter outdoor test range

Deviation from Measurement Procedure.....None

3.2 PCS - Base Frequency Blocks



3.3 PCS - Mobile Frequency Blocks



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3.4 Radiated Power and Radiated Spurious Emissions

§2.1053, 22.913(a)(2), 22.917(a), 24.232(c), 24.238(a), RSS-129 (8.1.1), RSS-133 (6.5.1)

Radiated power and radiated spurious emissions are measured outdoors at our 3-meter test range. The equipment under test is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. This level is then measured with a broadband average power meter. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive average power meter reading. This spurious level is recorded with the power meter. For readings above 1 GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration. This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.

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4.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST).

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	263-10dB	(DC-18GHz) 10 dB Attenuator	N/A		N/A	N/A
-	No.166	(1000-26500MHz) Microwave RF Cable	N/A		N/A	N/A
-	No.167	(100kHz - 100MHz) RG58 Coax Cable	N/A		N/A	N/A
Agilent	11713A	Attenuation/Switch Driver	12/2/2009	Annual	12/2/2010	3439A02645
Agilent	8449B	(1-26.5GHz) Pre-Amplifier	12/2/2009	Annual	12/2/2010	3008A00985
Agilent	85650A	Quasi-Peak Adapter	12/2/2009	Annual	12/2/2010	3303A01872
Agilent	8566B	(100Hz-22GHz) Spectrum Analyzer	12/2/2009	Annual	12/2/2010	3638A08713
Agilent	E8257D	(250kHz-20GHz) Signal Generator	3/30/2010	Annual	3/30/2011	MY45470194
Agilent	E8267C	Vector Signal Generator	9/29/2009	Biennial	9/29/2011	US42340152
Anritsu	ML2495A	Power Meter	10/12/2009	Annual	10/12/2010	941001
Emco	3115	Horn Antenna (1-18GHz)	4/8/2010	Biennial	4/8/2012	9205-3874
MiniCircuits	VHF-1300+	High Pass Filter	N/A		N/A	30716
MiniCircuits	VHF-3100+	High Pass Filter	N/A		N/A	30721
Rohde & Schwarz	CMU200	Base Station Simulator	9/11/2009	Annual	9/11/2010	836371/0079
Schwarzbeck	UHA9105	Dipole Antenna (400 - 1GHz) Rx	7/17/2009	Biennial	7/17/2011	9105-2404
Schwarzbeck	UHA9105	Dipole Antenna (400 - 1GHz) Tx	7/17/2009	Biennial	7/17/2011	9105-2403
Sunol	DRH-118	Horn Antenna (1 - 18GHz)	5/14/2009	Biennial	5/14/2011	A050307
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	7/17/2009	Biennial	7/17/2011	A051107

Table 4-1. Test Equipment

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5.0 SAMPLE CALCULATIONS

Emission Designator

Emission Designator = 1M25F9W

CDMA BW = 1.25 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data) (Measured at the 99.75% power bandwidth)

Spurious Radiated Emission - PCS Band

Example: Channel 25 PCS Mode 2nd Harmonic (3702.50 MHz)

The average receive power meter reading at 3 meters with the EUT on the turntable was -81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0 dBm on the power meter. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 3702.50 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm - (-24.80) = 50.3 dBc.

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6.0 TEST RESULTS

6.1 Summary

Company Name: Elster Solutions, LLC
 FCC ID: QZCWWIC-C01
 FCC Classification: PCS Licensed Transmitter (PCB)
 Mode(s): CDMA

FCC Part Section(s)	RSS Sections	Test Description	Test Limit	Test Condition	Test Result	Reference
TRANSMITTER MODE (TX)						
2.1046	RSS-132 (4.4) RSS-133 (4.1)	Transmitter Conducted Output Power	N/A	CONDUCTED	PASS*	Section 6.2
2.1053, 22.917(a), 24.238(a)	RSS-129 (8.1.1) RSS-133 (6.5.1)	Undesirable Emissions	$< 43 + 10\log_{10}(P[\text{Watts}])$ for all out-of-band emissions	RADIATED	PASS	Sections 6.3, 6.4

Table 6-1. Summary of Test Results

* **Note:** The conducted output powers are as previously reported in the original grant.

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6.2 Transmitter Conducted Output Power

§2.1046

A base station simulator (Agilent Model: E5515C) was used to establish communication with the **Elster A3 Alpha Meter with CDMA Wireless WIC and 900MHz LAN FCC ID: QZCWWIC-C01**. The base station simulator parameters were set to produce the maximum power from the EUT. This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. The CDMA conducted powers were measured using the base station simulator and are reported below.

Band	Channel	SO55 [dBm]	SO55 [dBm]	TDSO SO32 [dBm]
	F-RC	RC1	RC3	RC3
	Vocoder Rate	Full	Full	N/A
Cellular	1013	24.22	24.08	23.82
	384	24.28	24.23	24.11
	777	23.85	23.78	23.65
PCS	25	22.96	22.93	22.78
	600	23.04	23.05	22.89
	1175	22.54	22.63	22.41

Table 6-2. Transmitter Conducted Output Power Measurements



Figure 6-1. Conducted Power Test Setup Diagram

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6.3 Cellular CDMA Radiated Measurements

§2.1053, 22.917(a), RSS-129 (8.1.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 824.70 MHz
 CHANNEL: 1013
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: -13.00 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	MARGIN (dB)
1649.40	-76.14	6.42	-69.72	H	-56.72
2474.10	-71.74	6.42	-65.32	H	-52.32
3298.80	-75.71	6.74	-68.97	H	-55.97
4123.50	-76.72	7.55	-69.17	H	-56.17
4948.20	-91.18	7.57	-83.61	H	-70.61

Table 6-3. Radiated Spurious Data (Cellular CDMA Mode – Ch. 1013)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested while powered by an AC power source. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found with the EUT in the horizontal setup. The data reported in the table above was measured in this test setup.

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Cellular CDMA Radiated Measurements (Cont'd)

§2.1053, 22.917(a), RSS-129 (8.1.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 836.52 MHz
 CHANNEL: 384
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: -13.00 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	MARGIN (dB)
1673.04	-73.56	6.43	-67.14	H	-54.14
2509.56	-67.07	6.77	-60.31	H	-47.31
3346.08	-74.68	7.55	-67.13	H	-54.13
4182.60	-72.21	7.81	-64.41	H	-51.41
5019.12	-90.15	9.02	-81.13	H	-68.13

Table 6-4. Radiated Spurious Data (Cellular CDMA Mode – Ch. 384)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested while powered by an AC power source. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found with the EUT in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: QZCWWIC-C01		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
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Cellular CDMA Radiated Measurements (Cont'd)

§2.1053, 22.917(a), RSS-129 (8.1.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 848.31 MHz
 CHANNEL: 777
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: -13.00 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	MARGIN (dB)
1696.62	-68.33	6.44	-61.90	H	-48.90
2544.93	-58.80	6.83	-51.97	H	-38.97
3393.24	-74.11	7.55	-66.56	H	-53.56
4241.55	-72.47	8.05	-64.43	H	-51.43
5089.86	-89.70	8.92	-80.78	H	-67.78

Table 6-5. Radiated Spurious Data (Cellular CDMA Mode – Ch. 777)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested while powered by an AC power source. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found with the EUT in the horizontal setup. The data reported in the table above was measured in this test setup.

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6.4 PCS CDMA Radiated Measurements

§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1851.25 MHz
 CHANNEL: 25
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: -13.00 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	MARGIN (dB)
3702.50	-58.70	9.49	-49.21	H	-36.21
5553.75	-55.62	10.40	-45.22	H	-32.22
7405.00	-57.88	11.08	-46.80	H	-33.80
9256.25	-66.47	12.26	-54.21	H	-41.21
11107.50	-83.06	13.19	-69.88	H	-56.88

Table 6-6. Radiated Spurious Data (PCS CDMA Mode – Ch. 25)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested while powered by an AC power source. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found with the EUT in the horizontal setup. The data reported in the table above was measured in this test setup.

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PCS CDMA Radiated Measurements (Cont'd)

§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1880.00 MHz
 CHANNEL: 600
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: -13.00 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	MARGIN (dB)
3760.00	-53.43	9.43	-44.00	H	-31.00
5640.00	-53.83	10.24	-43.59	H	-30.59
7520.00	-55.29	11.12	-44.17	H	-31.17
9400.00	-67.44	12.32	-55.12	H	-42.12
11280.00	-82.35	13.17	-69.18	H	-56.18

Table 6-7. Radiated Spurious Data (PCS CDMA Mode – Ch. 600)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested while powered by an AC power source. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found with the EUT in the horizontal setup. The data reported in the table above was measured in this test setup.

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PCS CDMA Radiated Measurements (Cont'd)

§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1908.75 MHz
 CHANNEL: 1175
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: -13.00 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	MARGIN (dB)
3817.50	-62.62	9.37	-53.25	H	-40.25
5726.25	-49.04	10.08	-38.96	H	-25.96
7635.00	-54.66	11.21	-43.45	H	-30.45
9543.75	-67.61	12.38	-55.23	H	-42.23
11452.50	-81.64	13.15	-68.49	H	-55.49

Table 6-8. Radiated Spurious Data (PCS CDMA Mode – Ch. 1175)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested while powered by an AC power source. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found with the EUT in the horizontal setup. The data reported in the table above was measured in this test setup.

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7.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Elster A3 Alpha Meter with CDMA Wireless WIC and 900MHz LAN FCC ID: QZCWWIC-C01** complies with all the requirements of Parts 2, 22, and 24 of the FCC rules and RSS-129 and RSS-133 of the Industry Canada rules.

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