

EMISSIONS TEST REPORT

Report Number: 3136180BOX-001
Project Number: 3136180

Testing performed on the
VCA100 Radio
Model: BAEVCA100-V1FCGX-LF

To

FCC Part 15 Subpart B "Unintentional Radiators"
FCC Part 15 Subpart C "Intentional Radiators"

FCC Part 22 Subpart E "Public Mobile Radio – Paging and Radiotelephone Service"
FCC Part 74 Subpart H "Experimental Radio, Auxiliary, Special Broadcast And Other
Program Distributional Services – Low Power Auxiliary Stations"

FCC Part 90 Subpart I

"Private Land Mobile Radio Services – General Technical Requirements"

For
BAE Systems – Homeland Security Solutions

Test Performed by:
Intertek – ETL SEMKO
70 Codman Hill Road
Boxborough, MA 01719

Test Authorized by:
BAE Systems – Homeland Security Solutions
2 Forbes Road
Lexington, MA 02420

Prepared by:



Nicholas Abbondante

Date: 11/14/2007

Reviewed by:



Michael F. Murphy

Date: 11/19/2007

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1.0 Job Description

1.1 Client Information

This EUT has been tested at the request of:

Company: BAE Systems – Homeland Security Solutions
2 Forbes Road
Lexington, MA 02420

Contact: Mr. Ralph Lombardo

Telephone: 603-885-7172

Fax: N/A

Email: Ralph.lombardo@baesystems.com

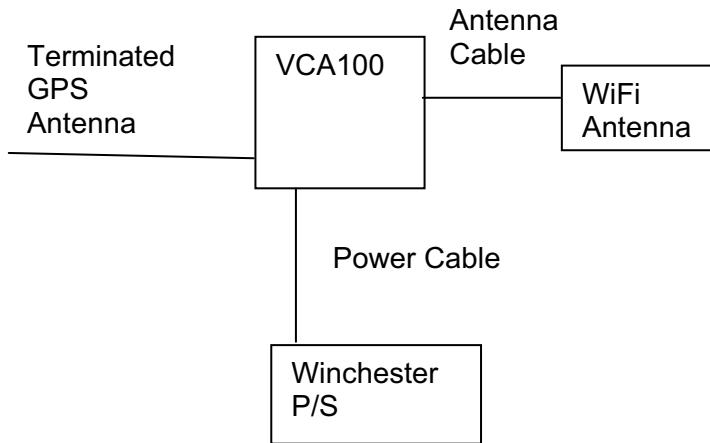
1.2 Equipment Under Test

Equipment Type: VCA100 Radio
Model Number(s): BAEVCA100-V1FCGX-LF
Serial number(s): 0716HNH000091
Manufacturer: BAE Systems – Homeland Security Solutions
EUT receive date: 10/26/2007
EUT received condition: Prototype in Good Condition
Test start date: 10/26/2007
Test end date: 11/06/2007

1.3 Test Plan Reference: Tested according to the standards listed, ANSI C63.4:2003, and ANSI/TIA-603-C-2004.

1.4 Test Configuration

1.4.1 Block Diagram



1.4.2. Cables:

| Cable | Shielding | Connector | Length (m) | Qty. |
|--------------------|-----------|--------------|------------|------|
| WiFi Antenna Cable | Braid | SMA | 4.2 | 1 |
| GPS Antenna Cable | Braid | SMA | 5.5 | 1 |
| Power Cable | None | Plastic/Wire | 3.25 | 1 |

1.4.3. Support Equipment:

Name: Antenex WiFi Antenna 2.4-2.5 GHz
Model No.: A10245
Serial No.: N/L

Name: All-Start Winchester Portable Power Generator
Model No.: WPG103
Serial No.: N/L

1.5 Mode(s) of Operation:

During testing, the EUT was powered from a nominal 12V DC power supply. During the FCC Part 15 Subpart B testing, the EUT was fully powered but no transmissions were occurring. During the FCC Part 15 Subpart C testing, the EUT was fully powered but only the WiFi transmitter was transmitting at maximum duty cycle. For the FCC Part 90 testing, the EUT was fully powered and was transmitting an unmodulated one second burst with one second intervals.

1.6 Floor Standing Equipment: Applicable: _____ Not Applicable: X

2.0 Test Summary

| TEST STANDARD | RESULTS | |
|---|---|---------|
| FCC Part 15 Subpart B FCC Part 15 Subpart C FCC Part 22 Subpart E FCC Part 74 Subpart H FCC Part 90 Subpart I | | |
| SUB-TEST | TEST PARAMETER | COMMENT |
| FCC Part 15 Subpart B | | |
| Radiated Emissions Receiver Verification FCC §15.109 | Spurious emissions must not exceed the FCC Part 15 Subpart B Class B limits. | Pass |
| FCC Part 22 Subpart E, FCC Part 74 Subpart H, FCC Part 90 Subpart I | | |
| RF Output Power FCC §22.565(a), FCC §74.861(d)(1), FCC §90.205(d) | Power must not exceed the following: FCC Part 22: 152-153 MHz – 1400 Watts ERP, 157-159 MHz – 150 Watts ERP FCC Part 74: Licensees may not operate at higher than 1 Watt ERP. FCC Part 90: Power limitation is dependant on the device antenna's height above average terrain (HAAT) and on the required service area, and will be authorized according to the HAAT table found in FCC §90.205(d) Table 1. | Pass |
| Radiated Emissions FCC §22.359(a), FCC §74.861(d)(3), FCC §90.210 | Spurious emissions must not exceed -13 dBm ERP. | Pass |
| FCC Part 15 Subpart C | | |
| RF Output Power FCC §15.247(b)(3) | Conducted RF Output Power must not exceed 1 Watt (30 dBm). EIRP must not exceed 4 Watts (36 dBm). | Pass |
| Radiated Emissions FCC §15.205, §15.209, §15.247(d) | Spurious emissions must be at least 20 dB lower than the fundamental field strength when measured with a 100 kHz bandwidth. Emissions which fall in the restricted bands of 15.205 must meet the general limits of 15.209. | Pass |

Notes: In order to comply with the results in this test report, Wurth Elektronik #74271132 and Fair-Rite #0443167251 must be installed in single loop configuration on the power cable right at the connection to the EUT.

3.0 Sample Calculations

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where FS = Field Strength in $\text{dB}\mu\text{V}/\text{m}$

RA = Receiver Amplitude (including preamplifier) in $\text{dB}\mu\text{V}$

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB

AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 $\text{dB}\mu\text{V}$ is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 $\text{dB}\mu\text{V}/\text{m}$. This value in $\text{dB}\mu\text{V}/\text{m}$ was converted to its corresponding level in $\mu\text{V}/\text{m}$.

$RA = 52.0 \text{ dB}\mu\text{V}$

$AF = 7.4 \text{ dB}/\text{m}$

$CF = 1.6 \text{ dB}$

$AG = 29.0 \text{ dB}$

$FS = 32 \text{ dB}\mu\text{V}/\text{m}$

$$\text{Level in } \mu\text{V}/\text{m} = [10(32 \text{ dB}\mu\text{V}/\text{m})/20] = 39.8 \mu\text{V}/\text{m}$$

The following is how net line-conducted readings were determined:

$$NF = RF + LF + CF + AF$$

Where NF = Net Reading in $\text{dB}\mu\text{V}$

RF = Reading from receiver in $\text{dB}\mu\text{V}$

LF = LISN Correction Factor in dB

CF = Cable Correction Factor in dB

AF = Attenuator Loss Factor in dB

To convert from $\text{dB}\mu\text{V}$ to μV or mV the following was used:

$$UF = 10^{(NF/20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$

Example:

$$NF = RF + LF + CF + AF = 28.5 + 0.2 + 0.4 + 20.0 = 49.1 \text{ dB}\mu\text{V}$$

$$UF = 10^{(49.1 \text{ dB}\mu\text{V}/20)} = 254 \mu\text{V}/\text{m}$$

3.1 Measurement Uncertainty

Compliance of the product is based on the measured value. However, the measurement uncertainty is included for informational purposes.

The expanded uncertainty ($k = 2$) for radiated emissions from 30 to 1000 MHz has been determined to be:

± 3.5 dB at 10m, ± 3.8 dB at 3m

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

± 2.6 dB

The expanded uncertainty ($k = 2$) for telecom port conducted emissions from 150 kHz to 30 MHz has been determined to be:

± 3.2 for ISN and voltage probe measurements

± 3.1 for current probe measurements

3.2 Site Description

Test Site(s): 2

Our OATS are 3m and 10m sheltered emissions measurement ranges located in a light commercial environment in Boxborough, Massachusetts. They meet the technical requirements of ANSI C63.4-2003 and CISPR 22:1993/EN 55022:1994 for radiated and conducted emission measurements. The shelter structure is entirely fiberglass and plastic, with outside dimensions of 33 ft x 57 ft. The structure resembles a quonset hut with a center ceiling height of 16.5 ft.

The testing floor is covered by a galvanized sheet metal groundplane that is earth-grounded via copper rods around the perimeter of the site. The joints between individual metal sheets are bridged with a 2 inch wide metal strips to provide low RF impedance contact throughout. The sheets are screwed in place with stainless steel, round-head screws every three inches. Site illumination and HVAC are provided from beneath the ground reference plane through flush entry ports, the port covers are electrically bonded to the ground plane.

A flush metal turntable with 12 ft. diameter and 5000 lb. load capacity (12,000 lb. in Site 3) is provided for floor-standing equipment. A wooden table 80 cm high is used for table-top equipment. The turntable is electrically connected to the ground plane with three copper straps. The straps are connected to the turntable at the center of it with ground braid. The copper strap is directly connected to the groundplane at the edges of the turntable. The turntable is located on the south end of the structure and the antennas are mounted 3 and 10 meters away to the north. The antenna mast is a non-conductive with remote control of antenna height and polarization. The antenna height is adjustable from 1 to 4 meters.

All final radiated emission measurements are performed with the testing personnel and measurement equipment located below the ground reference plane. The site has a full basement underneath the turntable where support equipment may be remotely located. Operation of the antenna, turntable and equipment under test is controlled by remote controls that manipulate the antenna height and polarization and with a turntable control. Test personnel are located below the ellipse when measurements are performed, however the site maintains the ability of having personnel manipulate cables while monitoring test equipment. Ambient radiated emissions are 6 dB or more below the relevant FCC emission limits.

AC mains power is brought to the equipment under test through a power line filter, to remove ambient conducted noise. 50 Hz (240 VAC single phase), 60 Hz power (120 VAC single phase, 208 VAC three phase), and 60 Hz (480 VAC three phase) are available. Conducted emission measurements are performed with a Line Impedance Stabilization Network (LISN) or Artificial Mains Network (AMN) bonded to the ground reference plane. A removable vertical groundplane (2 meter X 2 meter area) is used for line-conducted measurements for table top equipment. The vertical groundplane is electrically connected to the reference groundplane.

The EMC Lab has two Semi-anechoic Chambers and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference groundplanes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

Test Results: Pass**Test Standard:** FCC Part 15 Subpart B**Test:** Radiated Emissions Receiver Verification, FCC §15.109**Performance Criterion:** Spurious emissions must not exceed the FCC Part 15 Subpart B Class B limits.**Test Environment:**

| | | | | | | |
|--|---------------------|----|-----------------------|---------------------|-----------------|------|
| Environmental Conditions During Testing: | Ambient (°C): | 21 | Humidity (%): | 38 | Pressure (hPa): | 1050 |
| Pretest Verification Performed | Yes | | Equipment under Test: | BAEVCA100-V1FCGX-LF | | |
| Test Engineer(s): | Nicholas Abbondante | | | EUT Serial Number: | 0716HNH000091 | |

Test Equipment Used:

| TEST EQUIPMENT LIST | | | | | |
|---------------------|--|-----------------|-----------|------------|---------------|
| Item | Equipment Type | Make | Model No. | Serial No. | Next Cal. Due |
| 1 | Digital 4 Line Barometer | Mannix | 0ABA116 | BAR2 | 05/20/2008 |
| 2 | ANTENNA | EMCO | 3142 | 9711-1223 | 02/06/2008 |
| 3 | 10 Meter in floor cable for site 2 | ITS | RG214B/U | S2 10M FLR | 09/17/2008 |
| 4 | EMI Receiver with 85420E RF Filter Section S/N 3705A00230 On Loan from Littleton | Hewlett Packard | 8542E | 3906A00273 | 02/16/2008 |

Software Utilized:

| Name | Manufacturer | Version |
|----------------|-----------------------|------------------|
| EXCEL 2000 | Microsoft Corporation | 9.0.6926 SP-3 |
| EMI BOXBOROUGH | Intertek | 3/07/07 Revision |

Test Details:
Radiated Emissions

Company: BAE Systems
 Model #: BAEVCA100-V1FCGX-LF
 Serial #: 0716HNH000091
 Engineers: Nicholas Abbondante
 Project #: 3136180 Date(s): 10/26/07
 Standard: FCC Part 15 Subpart B Class B
 Receiver: HP 8542E (145-092)
 PreAmp: PRE9 3-25-08.txt
 PreAmp Used? (Y or N): N Voltage/Frequency: 12VDC Frequency Range: 30-1000 MHz
 Net = Reading (dBuV/m) + Antenna Factor (dB1/m) + Cable Loss (dB) - Preamp Factor (dB) - Distance Factor (dB)
 Peak: PK Quasi-Peak: QP Average: AVG RMS: RMS; NF = Noise Floor, RB = Restricted Band; Bandwidth denoted as RBW/VBW

| Detector Type | Ant. Pol. (V/H) | Frequency MHz | Reading dB(uV) | Antenna Factor dB(1m) | Cable Loss dB | Pre-amp Factor dB | Distance Factor dB | Net dB(uV/m) | Limit dB(uV/m) | Margin dB | Bandwidth | FCC |
|--|-----------------|---------------|----------------|-----------------------|---------------|-------------------|--------------------|--------------|----------------|-----------|-------------|-----|
| Note: Car lighter cable, Wurth Elektronik #74271132 and Fair-Rite #0443167251 in single loop on power cable right at connector | | | | | | | | | | | | |
| QP | V | 113.900 | 8.6 | 7.3 | 1.7 | 0.0 | -10.5 | 28.0 | 43.5 | -15.5 | 120/300 kHz | RB |
| QP | V | 127.100 | 18.6 | 6.7 | 1.8 | 0.0 | -10.5 | 37.5 | 43.5 | -6.0 | 120/300 kHz | RB |
| QP | V | 146.100 | 18.5 | 8.0 | 1.9 | 0.0 | -10.5 | 38.9 | 43.5 | -4.6 | 120/300 kHz | RB |
| QP | V | 265.600 | -2.8 | 12.8 | 2.7 | 0.0 | -10.5 | 23.1 | 46.0 | -22.9 | 120/300 kHz | RB |
| QP | V | 294.400 | 6.7 | 13.6 | 2.8 | 0.0 | -10.5 | 33.6 | 46.0 | -12.4 | 120/300 kHz | RB |
| QP | V | 300.000 | 6.6 | 13.7 | 2.9 | 0.0 | -10.5 | 33.6 | 46.0 | -12.4 | 120/300 kHz | RB |
| QP | V | 399.700 | 2.3 | 16.5 | 3.3 | 0.0 | -10.5 | 32.6 | 46.0 | -13.4 | 120/300 kHz | RB |
| QP | V | 400.400 | 3.9 | 16.5 | 3.3 | 0.0 | -10.5 | 34.2 | 46.0 | -11.8 | 120/300 kHz | RB |

Setup Photos



Setup Photos



Test Results: Pass**Test Standard:** FCC Part 22, FCC Part 74, FCC Part 90**Test:** RF Output Power, FCC §22.565(a), FCC §74.861(d)(1), FCC §90.205(d)**Performance Criterion:** Power must not exceed the following values:

FCC Part 22: 152-153 MHz – 1400 Watts ERP, 157-159 MHz – 150 Watts ERP

FCC Part 74: Licensees may not operate at higher than 1 Watt ERP.

FCC Part 90: Power limitation is dependant on the device antenna's height above average terrain (HAAT) and on the required service area, and will be authorized according to the HAAT table found in FCC §90.205(d) Table 1.

Test Environment:

| | | | | | | |
|--|---------------------|----|-----------------------|---------------------|-----------------|------|
| Environmental Conditions During Testing: | Ambient (°C): | 20 | Humidity (%): | 35 | Pressure (hPa): | 1050 |
| Pretest Verification Performed | Yes | | Equipment under Test: | BAEVCA100-V1FCGX-LF | | |
| Test Engineer(s): | Nicholas Abbondante | | | EUT Serial Number: | 0716HNH000091 | |

Test Equipment Used:

| TEST EQUIPMENT LIST | | | | | |
|---------------------|--|-----------------|---------------|------------|---------------|
| Item | Equipment Type | Make | Model No. | Serial No. | Next Cal. Due |
| 1 | Digital 4 Line Barometer | Mannix | 0ABA116 | BAR2 | 05/20/2008 |
| 2 | 10W, 30dB Attenuator | Weinschel Corp | 47-30-34 | BD43291 | 07/06/2008 |
| 3 | High Frequency Cable 40GHz | Megaphase | TM40 K1K1 197 | CBL027 | 12/04/2007 |
| 4 | EMI Receiver with 85420E RF Filter Section S/N 3705A00230 On Loan from Littleton | Hewlett Packard | 8542E | 3906A00273 | 02/16/2008 |

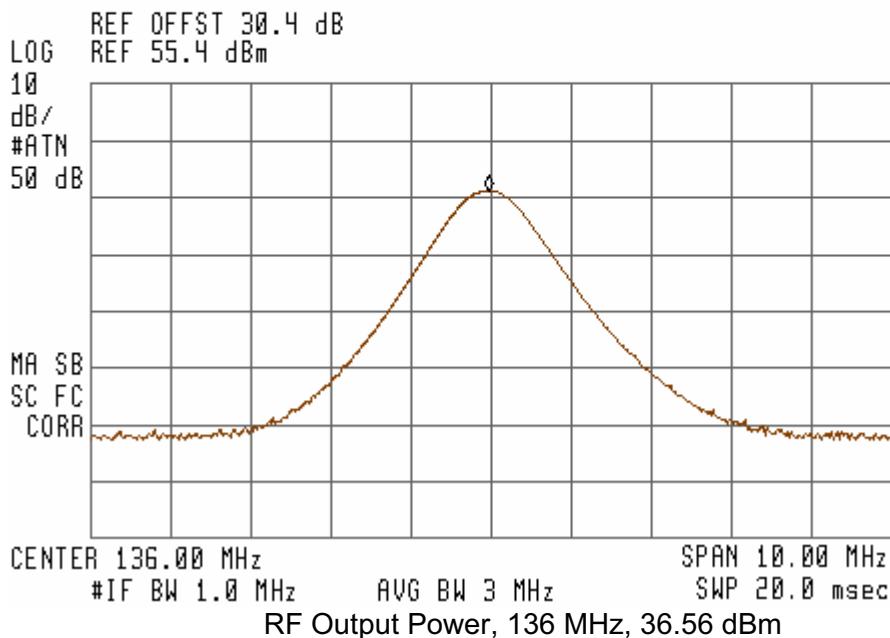
Software Utilized:

| Name | Manufacturer | Version |
|----------------|-----------------------|------------------|
| EXCEL 2000 | Microsoft Corporation | 9.0.6926 SP-3 |
| EMI BOXBOROUGH | Intertek | 3/07/07 Revision |

Test Details:

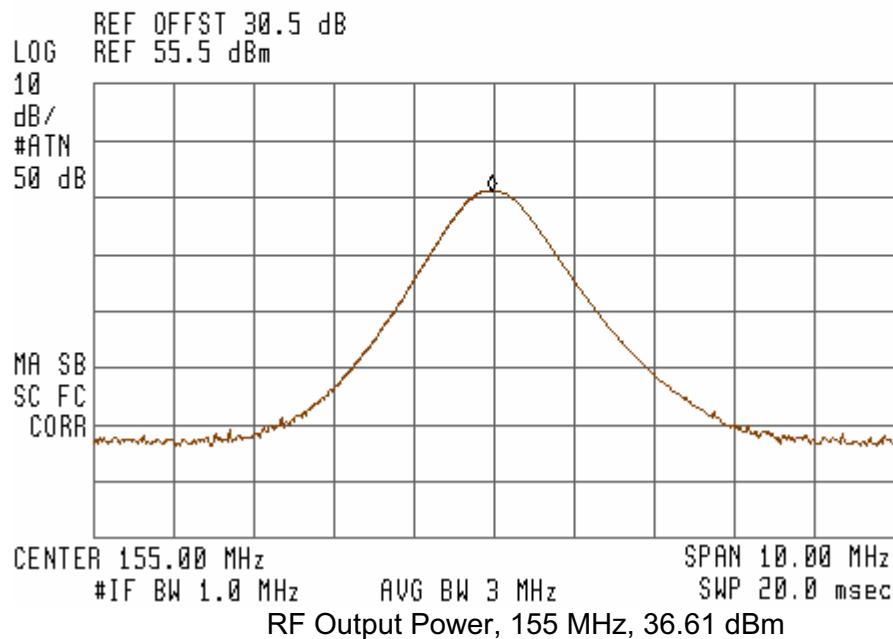
 12:00:58 OCT 31, 2007

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 135.98 MHz
36.56 dBm



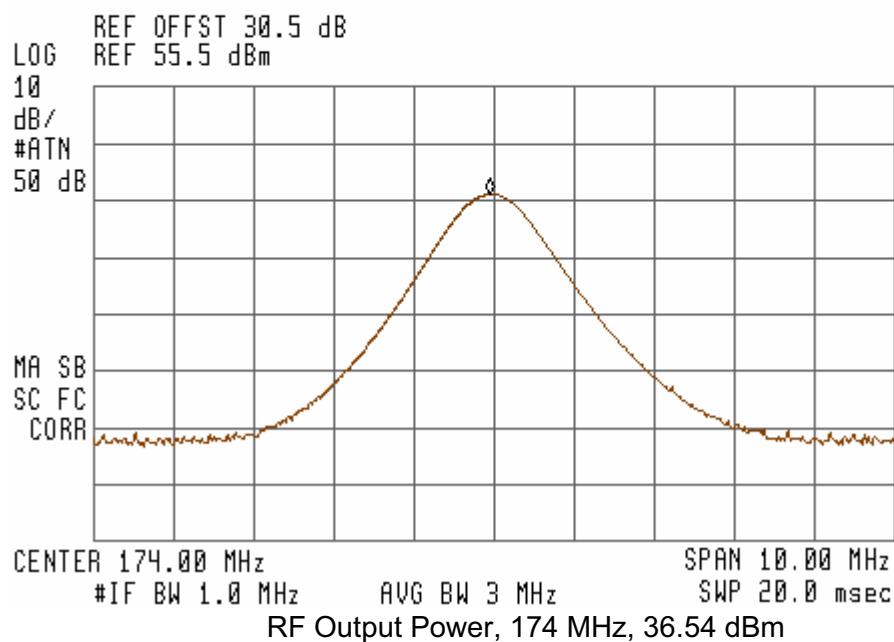
12:12:20 OCT 31, 2007

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 154.98 MHz
36.61 dBm



12:19:26 OCT 31, 2007

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 173.95 MHz
36.54 dBm



Test Results: Pass

Test Standard: FCC Part 22, FCC Part 74, FCC Part 90

Test: Radiated Emissions, FCC §22.359(a), FCC §74.861(d)(3), FCC §90.210

Performance Criterion: Spurious emissions must not exceed -13 dBm ERP.

Test Environment:

| | | | | | | | |
|--|---------------------|---------------|----|-----------------------|----|---------------------|------|
| Environmental Conditions During Testing: | | Ambient (°C): | 21 | Humidity (%): | 50 | Pressure (hPa): | 1050 |
| Pretest Verification Performed | | Yes | | Equipment under Test: | | BAEVCA100-V1FCGX-LF | |
| Test Engineer(s): | Nicholas Abbondante | | | EUT Serial Number: | | 0716HNH000091 | |

Test Equipment Used:

| TEST EQUIPMENT LIST | | | | | |
|---------------------|--|-------------------|---------------|------------|---------------|
| Item | Equipment Type | Make | Model No. | Serial No. | Next Cal. Due |
| 1 | Digital 4 Line Barometer | Mannix | 0ABA116 | BAR2 | 05/20/2008 |
| 2 | ANTENNA | EMCO | 3142 | 9711-1223 | 02/06/2008 |
| 3 | HORN ANTENNA | EMCO | 3115 | 9602-4675 | 09/24/2008 |
| 4 | 10 Meter in floor cable for site 2 | ITS | RG214B/U | S2 10M FLR | 09/17/2008 |
| 5 | High Frequency Cable 40GHz | Megaphase | TM40 K1K1 197 | CBL027 | 12/04/2007 |
| 6 | High Frequency Cable 40GHz | Megaphase | TM40 K1K1 197 | CBL028 | 12/04/2007 |
| 7 | High Frequency Cable 40GHz | Megaphase | TM40 K1K1 80 | CBL029 | 12/04/2007 |
| 8 | EMI Receiver with 85420E RF Filter Section S/N 3705A00230 On Loan from Littleton | Hewlett Packard | 8542E | 3906A00273 | 02/16/2008 |
| 9 | BROADBAND ANTENNA | Compliance Design | B100 | 1852 | 09/13/2008 |
| 10 | BROADBAND ANTENNA | Compliance Design | B200 | 1850 | 09/13/2008 |
| 11 | BROADBAND ANTENNA | Compliance Design | B300 | 00674 | 09/13/2008 |
| 12 | HORN ANTENNA | EMCO | 3115 | 9610-4980 | 06/18/2008 |
| 13 | Synthesized Sweep Generator | Hewlett Packard | 83620A | 3213A01244 | 02/06/2009 |

Software Utilized:

| Name | Manufacturer | Version |
|----------------|-----------------------|------------------|
| EXCEL 2000 | Microsoft Corporation | 9.0.6926 SP-3 |
| EMI BOXBOROUGH | Intertek | 3/07/07 Revision |

Test Details:
Radiated Emissions, Substitution

Company: BAE Systems
 Model #: BAEVCA100-V1FCGX-LF
 Serial #: 0716HNH000091
 Engineer(s): Nicholas Abbondante
 Project #: 3136180
 Date(s): 11/01/07
 Standard: FCC Part 90
 Barometer: BAR2 Temp/Humidity/Pressure: 21c 50% 1050mB
 Test Distance (m): 10 Voltage/Frequency: Fresh 12V Battery Frequency Range: 30-1000 MHz
 Net = Generator Level (0.00 dBm) + (EUT reading - Generator reading) - Cable Loss + Antenna Gain (dBi or dBd)
 Peak: PK Quasi-Peak: QP Average: AVG RMS: RMS: NF = Noise Floor RB = Restricted Band; Bandwidth denoted as RBW/VBW

| Detector Type | Ant. Pol. (V/H) | Frequency MHz | EUT Reading dB(uV) | Generator Reading dB(uV) | Transmit Cable Loss dB | Transmit Antenna dBi | Generator Level dBm | Net dBm | Limit dBm | Margin dB | Bandwidth |
|---------------|-----------------|---------------|--------------------|--------------------------|------------------------|----------------------|---------------------|---------|-----------|-----------|-------------|
| PK | V | 136.000 | 21.9 | 62.1 | 0.3 | 1.2 | -20.0 | -61.4 | -13.0 | -48.4 | 120/300 kHz |
| PK | V | 272.000 | 1.5 | 51.0 | 0.4 | -1.1 | -20.0 | -73.2 | -13.0 | -60.2 | 120/300 kHz |
| PK | V | 408.000 | 3.4 | 47.0 | 0.5 | 0.6 | -20.0 | -65.6 | -13.0 | -52.6 | 120/300 kHz |
| PK | V | 544.000 | 1.7 | 46.1 | 0.6 | 1.0 | -20.0 | -66.1 | -13.0 | -53.1 | 120/300 kHz |
| PK | V | 680.000 | 1.8 | 42.5 | 0.6 | 2.7 | -20.0 | -60.8 | -13.0 | -47.8 | 120/300 kHz |
| PK | V | 816.000 | 2.1 | 41.8 | 0.7 | -0.6 | -20.0 | -63.1 | -13.0 | -50.1 | 120/300 kHz |
| PK | V | 952.000 | 1.5 | 40.0 | 0.8 | 1.0 | -20.0 | -60.4 | -13.0 | -47.4 | 120/300 kHz |
| PK | V | 61.500 | 12.1 | 59.8 | 0.2 | -3.3 | -20.0 | -73.4 | -13.0 | -60.4 | 120/300 kHz |
| PK | V | 73.860 | 14.2 | 63.7 | 0.2 | 1.1 | -20.0 | -70.7 | -13.0 | -57.7 | 120/300 kHz |
| PK | V | 110.840 | 11.3 | 56.8 | 0.2 | -1.8 | -20.0 | -69.7 | -13.0 | -56.7 | 120/300 kHz |
| PK | V | 123.540 | 15.5 | 62.0 | 0.3 | 0.3 | -20.0 | -68.6 | -13.0 | -55.6 | 120/300 kHz |
| PK | V | 146.490 | 19.5 | 62.1 | 0.3 | 1.7 | -20.0 | -63.3 | -13.0 | -50.3 | 120/300 kHz |
| PK | H | 392.500 | 9.8 | 49.2 | 0.5 | 0.1 | -20.0 | -61.8 | -13.0 | -48.8 | 120/300 kHz |
| PK | H | 778.000 | 14.6 | 44.1 | 0.7 | 1.1 | -20.0 | -51.2 | -13.0 | -38.2 | 120/300 kHz |
| PK | H | 790.750 | 13.3 | 45.5 | 0.7 | 1.5 | -20.0 | -53.5 | -13.0 | -40.5 | 120/300 kHz |
| PK | V | 155.000 | 25.6 | 58.0 | 0.3 | 1.2 | -20.0 | -53.6 | -13.0 | -40.6 | 120/300 kHz |
| PK | V | 310.000 | 5.3 | 49.3 | 0.4 | -1.1 | -20.0 | -67.7 | -13.0 | -54.7 | 120/300 kHz |
| PK | V | 465.000 | 1.9 | 47.9 | 0.5 | -0.4 | -20.0 | -69.0 | -13.0 | -56.0 | 120/300 kHz |
| PK | H | 775.000 | 13.3 | 43.9 | 0.7 | 1.2 | -20.0 | -52.2 | -13.0 | -39.2 | 120/300 kHz |
| PK | V | 61.240 | 13.8 | 59.8 | 0.2 | -3.5 | -20.0 | -71.8 | -13.0 | -58.8 | 120/300 kHz |
| PK | V | 86.560 | 8.5 | 60.0 | 0.2 | -0.2 | -20.0 | -74.0 | -13.0 | -61.0 | 120/300 kHz |
| PK | V | 115.250 | 10.2 | 59.5 | 0.2 | -1.3 | -20.0 | -73.0 | -13.0 | -60.0 | 120/300 kHz |
| PK | V | 128.200 | 6.9 | 62.9 | 0.3 | 0.5 | -20.0 | -77.9 | -13.0 | -64.9 | 120/300 kHz |
| PK | V | 145.490 | 12.4 | 62.1 | 0.3 | 1.7 | -20.0 | -70.5 | -13.0 | -57.5 | 120/300 kHz |
| PK | H | 392.500 | 10.4 | 49.2 | 0.5 | 0.1 | -20.0 | -61.2 | -13.0 | -48.2 | 120/300 kHz |
| PK | H | 777.475 | 16.4 | 44.1 | 0.7 | 1.1 | -20.0 | -49.4 | -13.0 | -36.4 | 120/300 kHz |
| PK | H | 781.950 | 16.2 | 44.8 | 0.7 | 1.0 | -20.0 | -50.4 | -13.0 | -37.4 | 120/300 kHz |
| PK | H | 790.750 | 14.5 | 45.5 | 0.7 | 1.5 | -20.0 | -52.3 | -13.0 | -39.3 | 120/300 kHz |
| PK | V | 174.000 | 12.0 | 53.2 | 0.3 | -2.6 | -20.0 | -66.3 | -13.0 | -53.3 | 120/300 kHz |
| PK | V | 348.000 | 9.5 | 48.8 | 0.4 | -1.5 | -20.0 | -63.3 | -13.0 | -50.3 | 120/300 kHz |
| PK | V | 522.000 | 1.4 | 45.2 | 0.5 | 1.9 | -20.0 | -64.5 | -13.0 | -51.5 | 120/300 kHz |
| PK | V | 61.360 | 7.4 | 59.8 | 0.2 | -3.4 | -20.0 | -78.1 | -13.0 | -65.1 | 120/300 kHz |
| PK | V | 122.600 | 19.1 | 61.9 | 0.3 | 0.1 | -20.0 | -65.0 | -13.0 | -52.0 | 120/300 kHz |
| PK | V | 145.400 | 20.8 | 62.1 | 0.3 | 1.7 | -20.0 | -62.1 | -13.0 | -49.1 | 120/300 kHz |
| PK | V | 299.719 | 8.3 | 51.0 | 0.4 | -0.5 | -20.0 | -65.8 | -13.0 | -52.8 | 120/300 kHz |
| PK | H | 393.000 | 13.0 | 49.2 | 0.5 | 0.1 | -20.0 | -58.7 | -13.0 | -45.7 | 120/300 kHz |
| PK | H | 793.000 | 16.6 | 45.3 | 0.7 | 1.8 | -20.0 | -49.7 | -13.0 | -36.7 | 120/300 kHz |
| PK | H | 1088.000 | 6.7 | 47.7 | 0.8 | 6.2 | -20.0 | -57.7 | -13.0 | -44.7 | 1/3 MHz |
| PK | H | 1224.000 | 8.2 | 49.2 | 0.9 | 6.7 | -20.0 | -57.3 | -13.0 | -44.3 | 1/3 MHz |
| PK | H | 1360.000 | 8.8 | 50.5 | 0.9 | 7.1 | -20.0 | -57.6 | -13.0 | -44.6 | 1/3 MHz |
| PK | H | 1085.000 | 7.5 | 47.4 | 0.8 | 6.2 | -20.0 | -56.7 | -13.0 | -43.7 | 1/3 MHz |
| PK | H | 1240.000 | 8.6 | 48.9 | 0.9 | 6.7 | -20.0 | -56.7 | -13.0 | -43.7 | 1/3 MHz |
| PK | H | 1395.000 | 9.1 | 50.2 | 0.9 | 7.2 | -20.0 | -57.0 | -13.0 | -44.0 | 1/3 MHz |
| PK | H | 1550.000 | 11.3 | 51.0 | 1.0 | 7.8 | -20.0 | -55.1 | -13.0 | -42.1 | 1/3 MHz |
| PK | H | 1044.000 | 10.4 | 47.7 | 0.8 | 6.1 | -20.0 | -54.2 | -13.0 | -41.2 | 1/3 MHz |
| PK | H | 1185.200 | 18.7 | 48.0 | 0.9 | 6.5 | -20.0 | -45.8 | -13.0 | -32.8 | 1/3 MHz |
| PK | H | 1218.000 | 11.2 | 49.1 | 0.9 | 6.6 | -20.0 | -54.3 | -13.0 | -41.3 | 1/3 MHz |
| PK | H | 1392.000 | 11.5 | 50.1 | 0.9 | 7.2 | -20.0 | -54.4 | -13.0 | -41.4 | 1/3 MHz |
| PK | H | 1566.000 | 11.4 | 51.3 | 1.0 | 7.8 | -20.0 | -55.3 | -13.0 | -42.3 | 1/3 MHz |
| PK | H | 1740.000 | 11.8 | 50.3 | 1.1 | 8.4 | -20.0 | -53.2 | -13.0 | -40.2 | 1/3 MHz |

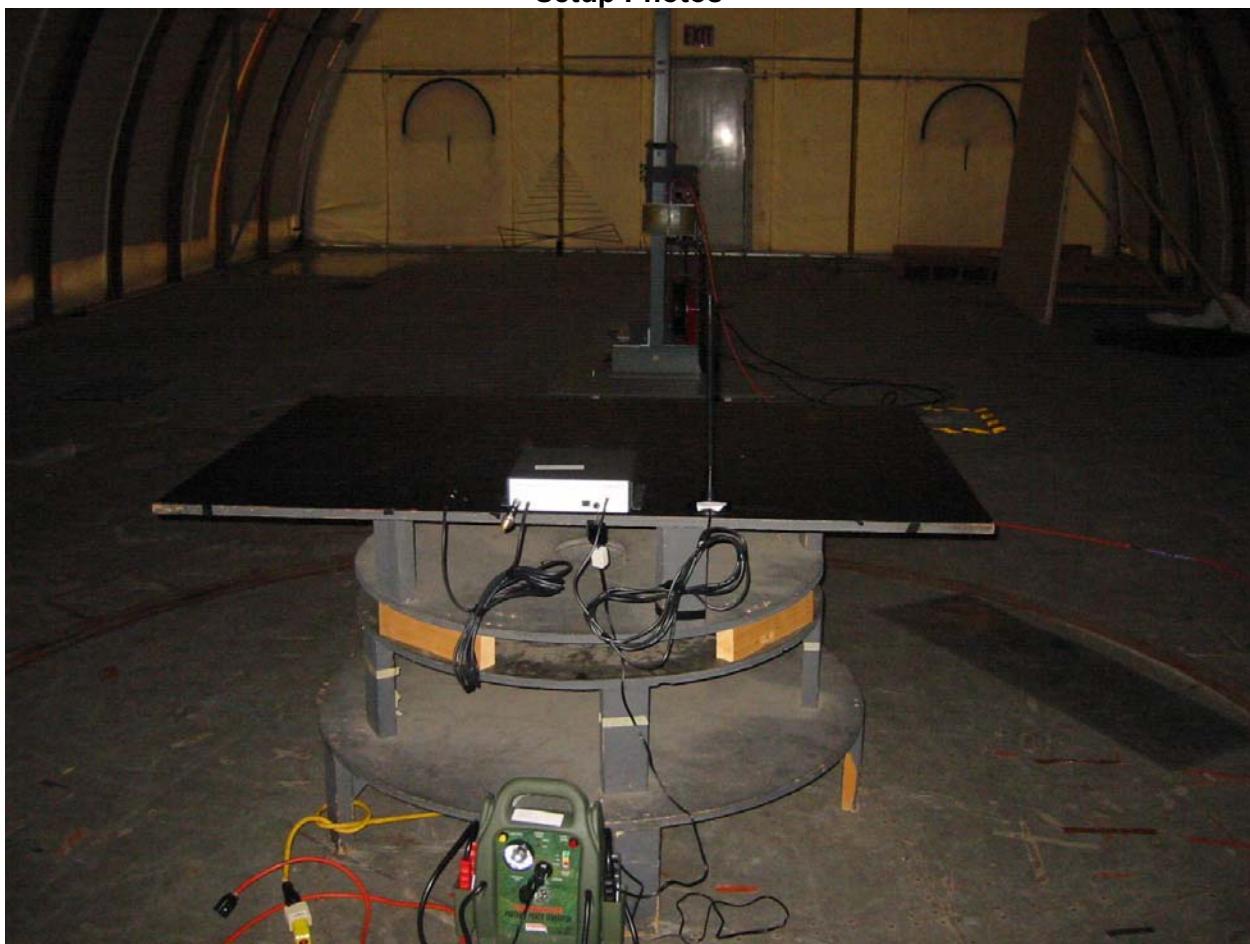
Setup Photos



Setup Photos



Setup Photos



Setup Photos



Test Results: Pass**Test Standard:** FCC Part 15 Subpart C**Test:** RF Output Power, FCC §15.247(b)(3)**Performance Criterion:** Conducted RF Output Power must not exceed 1 Watt (30 dBm). EIRP must not exceed 4 Watts (36 dBm).**Test Environment:**

| | | | | | | |
|--|---------------------|-----|-----------------------|---------------------|-----------------|-----|
| Environmental Conditions During Testing: | Ambient (°C): | N/A | Humidity (%): | N/A | Pressure (hPa): | N/A |
| Pretest Verification Performed | Yes | | Equipment under Test: | BAEVCA100-V1FCGX-LF | | |
| Test Engineer(s): | Nicholas Abbondante | | | EUT Serial Number: | 0716HNH000091 | |

Test Equipment Used:

| TEST EQUIPMENT LIST | | | | | |
|---------------------|----------------------------|-----------------|--------------|------------|---------------|
| Item | Equipment Type | Make | Model No. | Serial No. | Next Cal. Due |
| 1 | High Frequency Cable 40GHz | Megaphase | TM40 K1K1 80 | CBL030 | 12/04/2007 |
| 2 | 20 dB, Attenuator DC-18GHz | Weinschel Corp | 47-20-34 | BP0570 | 07/06/2008 |
| 3 | Peak Power Meter | Rohde & Schwarz | 857.8008.02 | 147-291 | 03/20/2008 |
| 4 | Peak Power Sensor | Rohde & Schwarz | 857.9604.02 | 147-193 | 03/20/2008 |

Software Utilized:

| Name | Manufacturer | Version |
|----------------|-----------------------|------------------|
| EXCEL 2000 | Microsoft Corporation | 9.0.6926 SP-3 |
| EMI BOXBOROUGH | Intertek | 3/07/07 Revision |

Test Details:

Channel 1 (2412 MHz): 27.62 dBm

Channel 6 (2437 MHz): 27.81 dBm

Channel 11 (2462 MHz): 27.93 dBm

Test Results: Pass

Test Standard: FCC Part 15 Subpart C

Test: Radiated Emissions, FCC §15.205, §15.209, §15.247(d)

Performance Criterion: Spurious emissions must be at least 20 dB lower than the fundamental field strength when measured with a 100 kHz bandwidth. Emissions which fall in the restricted bands of 15.205 must meet the general limits of 15.209.

Test Environment:

| Environmental Conditions During Testing: | Ambient (°C): | See Tables | Humidity (%): | See Tables | Pressure (hPa): | See Tables |
|--|---------------------|------------|---------------|-----------------------|---------------------|------------|
| Pretest Verification Performed | Yes | | | Equipment under Test: | BAEVCA100-V1FCGX-LF | |
| Test Engineer(s): | Nicholas Abbondante | | | EUT Serial Number: | 0716HNH000091 | |

Test Equipment Used:

| TEST EQUIPMENT LIST | | | | | |
|---------------------|--|-----------------|-----------------|------------|---------------|
| Item | Equipment Type | Make | Model No. | Serial No. | Next Cal. Due |
| 1 | Digital 4 Line Barometer | Mannix | 0ABA116 | BAR2 | 05/20/2008 |
| 2 | EMI Receiver with 85420E RF Filter S/N3705A00230 | Hewlett Packard | 8542E | 3906A00273 | 02/16/2008 |
| 3 | ANTENNA | EMCO | 3142 | 9711-1223 | 02/06/2008 |
| 4 | 10 Meter in floor cable for site 2 | ITS | RG214B/U | S2 10M FLR | 09/17/2008 |
| 5 | HORN ANTENNA | EMCO | 3115 | 9602-4675 | 09/24/2008 |
| 6 | High Frequency Cable 40GHz | Megaphase | TM40 K1K1 197 | CBL027 | 12/04/2007 |
| 7 | High Frequency Cable 40GHz | Megaphase | TM40 K1K1 197 | CBL028 | 12/04/2007 |
| 8 | High Frequency Cable 40GHz | Megaphase | TM40 K1K1 80 | CBL029 | 12/04/2007 |
| 9 | Preamplifier | Miteq | NSP4000-NFG | 1260417 | 03/25/2008 |
| 10 | Spectrum Analyzer | Agilent | E7405A | US40240205 | 08/09/2008 |
| 11 | High Frequency Cable 40GHz | Megaphase | TM40 K1K1 80 | CBL030 | 12/04/2007 |
| 12 | ANTENNA, RIDGED GUIDE, 18-40 GHZ | EMCO | 3116 | 2090 | 12/13/2007 |
| 13 | 1GHz High Pass Filter | Reactel, Inc | 7HS-1G/10G-S11 | 06-1 | 09/18/2008 |
| 14 | 3GHz High Pass Filter | Reactel, Inc | 7HSX-3G/18G-S11 | 06-1 | 09/18/2008 |

Software Utilized:

| Name | Manufacturer | Version |
|----------------|-----------------------|------------------|
| EXCEL 2000 | Microsoft Corporation | 9.0.6926 SP-3 |
| EMI BOXBOROUGH | Intertek | 3/07/07 Revision |

Test Details:
Special Radiated Emissions

Company: BAE Systems
 Model #: BAEVCA100-V1FCGX-LF
 Serial #: 0716HNH000091
 Engineers: Nicholas Abbondante
 Project #: 3136180 Date(s): 11/06/07
 Standard: FCC Part 15 Subpart C 15.247
 Receiver: HP 8542E (145-092) Limit Distance (m): 3
 PreAmp: PRE9 3-25-08.txt Test Distance (m): 10
 PreAmp Used? (Y or N): N Voltage/Frequency: Fresh 12V Battery Frequency Range: 30-1000 MHz
 Net = Reading (dBuV/m) + Antenna Factor (dB1/m) + Cable Loss (dB) - Preamp Factor (dB) - Distance Factor (dB)
 Peak: PK Quasi-Peak: QP Average: AVG RMS: RMS; NF = Noise Floor, RB = Restricted Band; Bandwidth denoted as RBW/VBW

| Detector Type | Ant. Pol. (V/H) | Frequency MHz | Reading dB(uV) | Antenna Factor dB(1/m) | Cable Loss dB | Pre-amp Factor dB | Distance Factor dB | Net dB(uV/m) | Limit dB(uV/m) | Margin dB | Bandwidth |
|----------------------------------|-----------------|---------------|----------------|------------------------|---------------|-------------------|--------------------|--------------|----------------|-----------|-------------|
| Note: WiFi Channel 1 (2412 MHz) | | | | | | | | | | | |
| PK | V | 86.250 | 15.9 | 7.1 | 1.5 | 0.0 | -10.5 | 35.0 | 90.3 | -55.3 | 120/300 kHz |
| QP | V | 109.100 | 14.2 | 7.6 | 1.6 | 0.0 | -10.5 | 33.9 | 43.5 | -9.6 | 120/300 kHz |
| QP | V | 123.100 | 15.6 | 6.7 | 1.8 | 0.0 | -10.5 | 34.6 | 43.5 | -8.9 | 120/300 kHz |
| PK | V | 144.600 | 22.3 | 7.8 | 1.9 | 0.0 | -10.5 | 42.5 | 90.3 | -47.8 | 120/300 kHz |
| PK | V | 300.000 | 6.2 | 13.7 | 2.9 | 0.0 | -10.5 | 33.3 | 90.3 | -57.0 | 120/300 kHz |
| PK | V | 399.600 | 9.0 | 16.5 | 3.3 | 0.0 | -10.5 | 39.3 | 90.3 | -51.0 | 120/300 kHz |
| PK | V | 419.500 | 7.3 | 16.8 | 3.5 | 0.0 | -10.5 | 38.0 | 90.3 | -52.3 | 120/300 kHz |
| PK | H | 778.000 | 16.3 | 22.8 | 5.0 | 0.0 | -10.5 | 54.6 | 90.3 | -35.7 | 120/300 kHz |
| Note: WiFi Channel 6 (2437 MHz) | | | | | | | | | | | |
| PK | V | 85.650 | 14.2 | 7.1 | 1.5 | 0.0 | -10.5 | 33.1 | 90.3 | -57.2 | 120/300 kHz |
| QP | V | 109.100 | 12.9 | 7.6 | 1.6 | 0.0 | -10.5 | 32.6 | 43.5 | -10.9 | 120/300 kHz |
| QP | V | 117.800 | 16.7 | 7.0 | 1.7 | 0.0 | -10.5 | 35.9 | 43.5 | -7.6 | 120/300 kHz |
| PK | V | 147.385 | 24.5 | 8.2 | 1.9 | 0.0 | -10.5 | 45.0 | 90.3 | -45.3 | 120/300 kHz |
| PK | V | 300.000 | 4.0 | 13.7 | 2.9 | 0.0 | -10.5 | 31.0 | 90.3 | -59.3 | 120/300 kHz |
| PK | H | 399.750 | 6.8 | 16.4 | 3.3 | 0.0 | -10.5 | 37.0 | 90.3 | -53.3 | 120/300 kHz |
| PK | H | 768.000 | 8.0 | 22.8 | 5.0 | 0.0 | -10.5 | 46.2 | 90.3 | -44.1 | 120/300 kHz |
| PK | H | 807.000 | 16.4 | 22.5 | 5.2 | 0.0 | -10.5 | 54.5 | 90.3 | -35.8 | 120/300 kHz |
| Note: WiFi Channel 11 (2462 MHz) | | | | | | | | | | | |
| PK | V | 86.250 | 15.5 | 7.1 | 1.5 | 0.0 | -10.5 | 34.5 | 90.3 | -55.8 | 120/300 kHz |
| QP | V | 109.300 | 12.7 | 7.6 | 1.6 | 0.0 | -10.5 | 32.4 | 43.5 | -11.1 | 120/300 kHz |
| QP | V | 122.500 | 13.5 | 6.8 | 1.8 | 0.0 | -10.5 | 32.5 | 90.3 | -57.8 | 120/300 kHz |
| PK | V | 148.000 | 21.0 | 8.2 | 1.9 | 0.0 | -10.5 | 41.6 | 90.3 | -48.7 | 120/300 kHz |
| PK | V | 300.500 | 6.3 | 13.7 | 2.9 | 0.0 | -10.5 | 33.3 | 90.3 | -57.0 | 120/300 kHz |
| PK | V | 392.850 | 9.3 | 16.4 | 3.3 | 0.0 | -10.5 | 39.4 | 90.3 | -50.9 | 120/300 kHz |
| PK | V | 419.500 | 7.7 | 16.8 | 3.5 | 0.0 | -10.5 | 38.4 | 90.3 | -51.9 | 120/300 kHz |
| PK | H | 766.800 | 13.9 | 22.8 | 5.0 | 0.0 | -10.5 | 52.0 | 90.3 | -38.3 | 120/300 kHz |
| PK | H | 791.300 | 12.0 | 22.6 | 5.2 | 0.0 | -10.5 | 50.2 | 90.3 | -40.1 | 120/300 kHz |

Special Radiated Emissions

Company: BAE Systems

Model #: BAEVCA100-V1FCGX-LF

Serial #: 0716HNH000091

Engineers: Nicholas Abbondante

Project #: 3136180

Date(s): 11/02/07

Location: Site 2

Antenna & Cables: HF Bands: N, LF, HF, SHF

Antenna: Horn2 V1m 9-24-2008.txt Horn2 H1m 9-24-2008.txt

Cable(s): CBL027 12-04-2007.txt CBL028 12-04-2007.txt

Barometer: BAR2

Standard: FCC Part 15 Subpart C 15.247

Temp/Humidity/Pressure: 23c 30% 1050mB

Receiver: Agilent E7405A (AGL001)

Limit Distance (m): 3

PreAmp: PRE9 3-25-08.txt

Test Distance (m): 3

PreAmp Used? (Y or N):

N

Voltage/Frequency: Fresh 12V Battery Frequency Range: 1-4 GHz

Net = Reading (dBuV/m) + Antenna Factor (dB1/m) + Cable Loss (dB) - Preamp Factor (dB) - Distance Factor (dB)

Peak: PK Quasi-Peak: QP Average: AVG RMS: RMS; NF = Noise Floor, RB = Restricted Band; Bandwidth denoted as RBW/VBW

| Detector Type | Ant. Pol. (V/H) | Frequency MHz | Reading dB(uV) | Antenna Factor dB(1/m) | Cable Loss dB | Pre-amp Factor dB | Distance Factor dB | Net dB(uV/m) | Limit dB(uV/m) | Margin dB | Bandwidth | FCC |
|-----------------------------------|-----------------|---------------|----------------|------------------------|---------------|-------------------|--------------------|--------------|----------------|-----------|-------------|-----|
| Note: Fundamental Power Reference | | | | | | | | | | | | |
| PK | V | 2412.000 | 75.3 | 28.7 | 6.3 | 0.0 | 0.0 | 110.3 | - | - | 100/300 kHz | |
| PK | V | 2437.000 | 75.0 | 28.7 | 6.3 | 0.0 | 0.0 | 110.0 | - | - | 100/300 kHz | |
| PK | V | 2462.000 | 75.1 | 28.7 | 6.3 | 0.0 | 0.0 | 110.2 | - | - | 100/300 kHz | |
| Note: WiFi Channel 1 (2412 MHz) | | | | | | | | | | | | |
| PK | V | 2122.500 | 18.0 | 28.2 | 5.8 | 0.0 | 0.0 | 52.1 | 90.3 | -38.2 | 100/300 kHz | RB |
| PK | V | 2247.500 | 23.2 | 28.4 | 6.0 | 0.0 | 0.0 | 57.6 | 74.0 | -16.4 | 1/3 MHz | RB |
| AVG | V | 2247.500 | 0.1 | 28.4 | 6.0 | 0.0 | 0.0 | 34.5 | 54.0 | -19.5 | 1/3 MHz | RB |
| PK | V | 2692.500 | 25.8 | 29.5 | 6.7 | 0.0 | 0.0 | 61.9 | 74.0 | -12.1 | 1/3 MHz | RB |
| AVG | V | 2692.500 | 2.4 | 29.5 | 6.7 | 0.0 | 0.0 | 38.6 | 54.0 | -15.4 | 1/3 MHz | RB |
| Note: WiFi Channel 6 (2437 MHz) | | | | | | | | | | | | |
| PK | V | 2135.000 | 19.4 | 28.2 | 5.9 | 0.0 | 0.0 | 53.4 | 90.3 | -36.9 | 100/300 kHz | RB |
| PK | V | 2256.000 | 24.3 | 28.4 | 6.0 | 0.0 | 0.0 | 58.7 | 74.0 | -15.3 | 1/3 MHz | RB |
| AVG | V | 2256.000 | 1.0 | 28.4 | 6.0 | 0.0 | 0.0 | 35.5 | 54.0 | -18.5 | 1/3 MHz | RB |
| PK | V | 2690.000 | 25.2 | 29.5 | 6.7 | 0.0 | 0.0 | 61.4 | 74.0 | -12.6 | 1/3 MHz | RB |
| AVG | V | 2690.000 | 1.5 | 29.5 | 6.7 | 0.0 | 0.0 | 37.6 | 54.0 | -16.4 | 1/3 MHz | RB |
| Note: WiFi Channel 11 (2462 MHz) | | | | | | | | | | | | |
| PK | V | 2157.500 | 19.4 | 28.3 | 5.9 | 0.0 | 0.0 | 53.5 | 90.3 | -36.8 | 100/300 kHz | RB |
| PK | V | 2256.000 | 24.7 | 28.4 | 6.0 | 0.0 | 0.0 | 59.1 | 74.0 | -14.9 | 1/3 MHz | RB |
| AVG | V | 2256.000 | 0.6 | 28.4 | 6.0 | 0.0 | 0.0 | 35.0 | 54.0 | -19.0 | 1/3 MHz | RB |
| PK | V | 2690.000 | 25.2 | 29.5 | 6.7 | 0.0 | 0.0 | 61.4 | 74.0 | -12.7 | 1/3 MHz | RB |
| AVG | V | 2690.000 | 2.3 | 29.5 | 6.7 | 0.0 | 0.0 | 38.4 | 54.0 | -15.6 | 1/3 MHz | RB |

Special Radiated Emissions

Company: BAE Systems
 Model #: BAEVCA100-V1FCGX-LF
 Serial #: 0716HNH000091
 Engineers: Nicholas Abbondante
 Project #: 3136180 Date(s): 11/05/07
 Standard: FCC Part 15 Subpart C 15.247
 Receiver: Agilent E7405A (AGL001) Limit Distance (m): 3
 PreAmp: PRE9 3-25-08.txt Test Distance (m): 3
 PreAmp Used? (Y or N): Y Voltage/Frequency: Fresh 12V Battery Frequency Range: 4-18 GHz
 Net = Reading (dBuV/m) + Antenna Factor (dB1/m) + Cable Loss (dB) - Preamp Factor (dB) - Distance Factor (dB)
 Peak: PK Quasi-Peak: QP Average: AVG RMS: RMS; NF = Noise Floor, RB = Restricted Band; Bandwidth denoted as RBW/VBW

| Detector Type | Ant. Pol. (V/H) | Frequency MHz | Reading dB(uV) | Antenna Factor dB(1/m) | Cable Loss dB | Pre-amp Factor dB | Distance Factor dB | Net dB(uV/m) | Limit dB(uV/m) | Margin dB | Bandwidth | FCC |
|----------------------------------|-----------------|---------------|----------------|------------------------|---------------|-------------------|--------------------|--------------|----------------|-----------|-------------|-----|
| Note: WiFi Channel 1 (2412 MHz) | | | | | | | | | | | | |
| PK | V | 4824.000 | 38.2 | 33.6 | 6.4 | 28.4 | 0.0 | 49.8 | 74.0 | -24.2 | 1/3 MHz | RB |
| AVG | V | 4824.000 | 24.8 | 33.6 | 6.4 | 28.4 | 0.0 | 36.4 | 54.0 | -17.6 | 1/3 MHz | RB |
| PK | V | 7236.000 | 27.0 | 36.7 | 8.1 | 28.1 | 0.0 | 43.6 | 90.3 | -46.7 | 100/300 kHz | |
| PK | H | 9648.000 | 28.9 | 38.2 | 9.7 | 27.8 | 0.0 | 49.0 | 90.3 | -41.3 | 100/300 kHz | |
| PK | V | 12060.000 | 35.2 | 39.1 | 11.3 | 27.7 | 0.0 | 57.8 | 74.0 | -16.2 | 1/3 MHz | RB |
| AVG | V | 12060.000 | 21.7 | 39.1 | 11.3 | 27.7 | 0.0 | 44.3 | 54.0 | -9.7 | 1/3 MHz | RB |
| PK | V | 14472.000 | 37.4 | 40.7 | 12.7 | 27.6 | 0.0 | 63.2 | 74.0 | -10.8 | 1/3 MHz | RB |
| AVG | V | 14472.000 | 23.8 | 40.7 | 12.7 | 27.6 | 0.0 | 49.6 | 54.0 | -4.4 | 1/3 MHz | RB |
| PK | V | 16884.000 | 26.4 | 40.6 | 15.1 | 28.4 | 0.0 | 53.8 | 90.3 | -36.5 | 100/300 kHz | |
| Note: WiFi Channel 6 (2437 MHz) | | | | | | | | | | | | |
| PK | V | 4874.000 | 37.8 | 33.7 | 6.5 | 28.4 | 0.0 | 49.5 | 74.0 | -24.5 | 1/3 MHz | RB |
| AVG | V | 4874.000 | 24.9 | 33.7 | 6.5 | 28.4 | 0.0 | 36.6 | 54.0 | -17.4 | 1/3 MHz | RB |
| PK | V | 7311.000 | 38.2 | 36.8 | 8.2 | 28.1 | 0.0 | 55.1 | 74.0 | -18.9 | 1/3 MHz | RB |
| AVG | V | 7311.000 | 24.4 | 36.8 | 8.2 | 28.1 | 0.0 | 41.3 | 54.0 | -12.7 | 1/3 MHz | RB |
| PK | V | 9748.000 | 27.7 | 38.4 | 9.7 | 27.8 | 0.0 | 48.0 | 90.3 | -42.3 | 100/300 kHz | |
| PK | V | 12185.000 | 35.6 | 39.1 | 11.3 | 27.7 | 0.0 | 58.4 | 74.0 | -15.6 | 1/3 MHz | RB |
| AVG | V | 12185.000 | 21.8 | 39.1 | 11.3 | 27.7 | 0.0 | 44.5 | 54.0 | -9.5 | 1/3 MHz | RB |
| PK | V | 14622.000 | 28.7 | 40.2 | 12.8 | 27.6 | 0.0 | 54.1 | 90.3 | -36.2 | 100/300 kHz | |
| PK | V | 17059.000 | 26.3 | 41.5 | 15.4 | 28.4 | 0.0 | 54.8 | 90.3 | -35.5 | 100/300 kHz | |
| Note: WiFi Channel 11 (2462 MHz) | | | | | | | | | | | | |
| PK | V | 4924.000 | 37.8 | 33.8 | 6.5 | 28.4 | 0.0 | 49.7 | 74.0 | -24.3 | 1/3 MHz | RB |
| AVG | V | 4924.000 | 24.5 | 33.8 | 6.5 | 28.4 | 0.0 | 36.4 | 54.0 | -17.6 | 1/3 MHz | RB |
| PK | V | 7386.000 | 37.2 | 37.0 | 8.2 | 28.1 | 0.0 | 54.3 | 74.0 | -19.7 | 1/3 MHz | RB |
| AVG | V | 7386.000 | 24.1 | 37.0 | 8.2 | 28.1 | 0.0 | 41.2 | 54.0 | -12.8 | 1/3 MHz | RB |
| PK | V | 9848.000 | 27.0 | 38.5 | 9.8 | 27.8 | 0.0 | 47.5 | 90.3 | -42.8 | 100/300 kHz | |
| PK | V | 12310.000 | 35.2 | 39.2 | 11.4 | 27.7 | 0.0 | 58.1 | 74.0 | -15.9 | 1/3 MHz | RB |
| AVG | V | 12310.000 | 21.7 | 39.2 | 11.4 | 27.7 | 0.0 | 44.5 | 54.0 | -9.5 | 1/3 MHz | RB |
| PK | V | 14772.000 | 27.4 | 39.7 | 12.9 | 27.6 | 0.0 | 52.4 | 90.3 | -37.9 | 100/300 kHz | |
| PK | V | 17234.000 | 27.2 | 42.5 | 15.7 | 28.5 | 0.0 | 56.9 | 90.3 | -33.4 | 100/300 kHz | |

Special Radiated Emissions

Company: BAE Systems
 Model #: BAEVCA100-V1FCGX-LF
 Serial #: 0716HNH000091
 Engineers: Nicholas Abbondante
 Project #: 3136180 Date(s): 11/03/07
 Standard: FCC Part 15 Subpart C 15.247
 Receiver: Agilent E7405A (AGL001)
 PreAmp: PRE9 3-25-08.txt
 PreAmp Used? (Y or N): Y Voltage/Frequency: Fresh 12V Battery Frequency Range: 18-26 GHz
 Net = Reading (dBuV/m) + Antenna Factor (dB1/m) + Cable Loss (dB) - Preamp Factor (dB) - Distance Factor (dB)
 Peak: PK Quasi-Peak: QP Average: AVG RMS: RMS; NF = Noise Floor, RB = Restricted Band; Bandwidth denoted as RBW/VBW

| Detector Type | Ant. Pol. (V/H) | Frequency MHz | Reading dB(uV) | Antenna Factor dB(1/m) | Cable Loss dB | Pre-amp Factor dB | Distance Factor dB | Net dB(uV/m) | Limit dB(uV/m) | Margin dB | Bandwidth |
|----------------------------------|-----------------|---------------|----------------|------------------------|---------------|-------------------|--------------------|--------------|----------------|-----------|-------------|
| Note: WiFi Channel 1 (2412 MHz) | | | | | | | | | | | |
| PK | V | 19296.000 | 36.0 | 45.1 | 10.3 | 29.3 | 0.0 | 62.1 | 74.0 | -11.9 | 1/3 MHz |
| AVG | V | 19296.000 | 23.2 | 45.1 | 10.3 | 29.3 | 0.0 | 49.3 | 54.0 | -4.7 | 1/3 MHz |
| PK | V | 21708.000 | 25.1 | 45.3 | 9.9 | 29.8 | 0.0 | 50.5 | 90.3 | -39.8 | 100/300 kHz |
| PK | V | 24120.000 | 25.4 | 45.6 | 10.4 | 30.1 | 0.0 | 51.3 | 90.3 | -39.0 | 100/300 kHz |
| Note: WiFi Channel 6 (2437 MHz) | | | | | | | | | | | |
| PK | V | 19496.000 | 36.7 | 45.2 | 10.1 | 29.4 | 0.0 | 62.6 | 74.0 | -11.4 | 1/3 MHz |
| AVG | V | 19496.000 | 23.4 | 45.2 | 10.1 | 29.4 | 0.0 | 49.3 | 54.0 | -4.7 | 1/3 MHz |
| PK | V | 21933.000 | 25.1 | 45.2 | 10.0 | 29.8 | 0.0 | 50.5 | 90.3 | -39.8 | 100/300 kHz |
| PK | V | 24370.000 | 25.5 | 45.7 | 10.4 | 30.1 | 0.0 | 51.5 | 90.3 | -38.8 | 100/300 kHz |
| Note: WiFi Channel 11 (2462 MHz) | | | | | | | | | | | |
| PK | V | 19696.000 | 36.0 | 45.2 | 10.0 | 29.5 | 0.0 | 61.7 | 74.0 | -12.3 | 1/3 MHz |
| AVG | V | 19696.000 | 23.0 | 45.2 | 10.0 | 29.5 | 0.0 | 48.7 | 54.0 | -5.3 | 1/3 MHz |
| PK | V | 22158.000 | 37.3 | 45.2 | 10.1 | 29.9 | 0.0 | 62.7 | 74.0 | -11.3 | 1/3 MHz |
| AVG | V | 22158.000 | 25.3 | 45.2 | 10.1 | 29.9 | 0.0 | 50.7 | 54.0 | -3.3 | 1/3 MHz |
| PK | V | 24620.000 | 27.3 | 45.9 | 10.5 | 30.1 | 0.0 | 53.5 | 90.3 | -36.8 | 100/300 kHz |

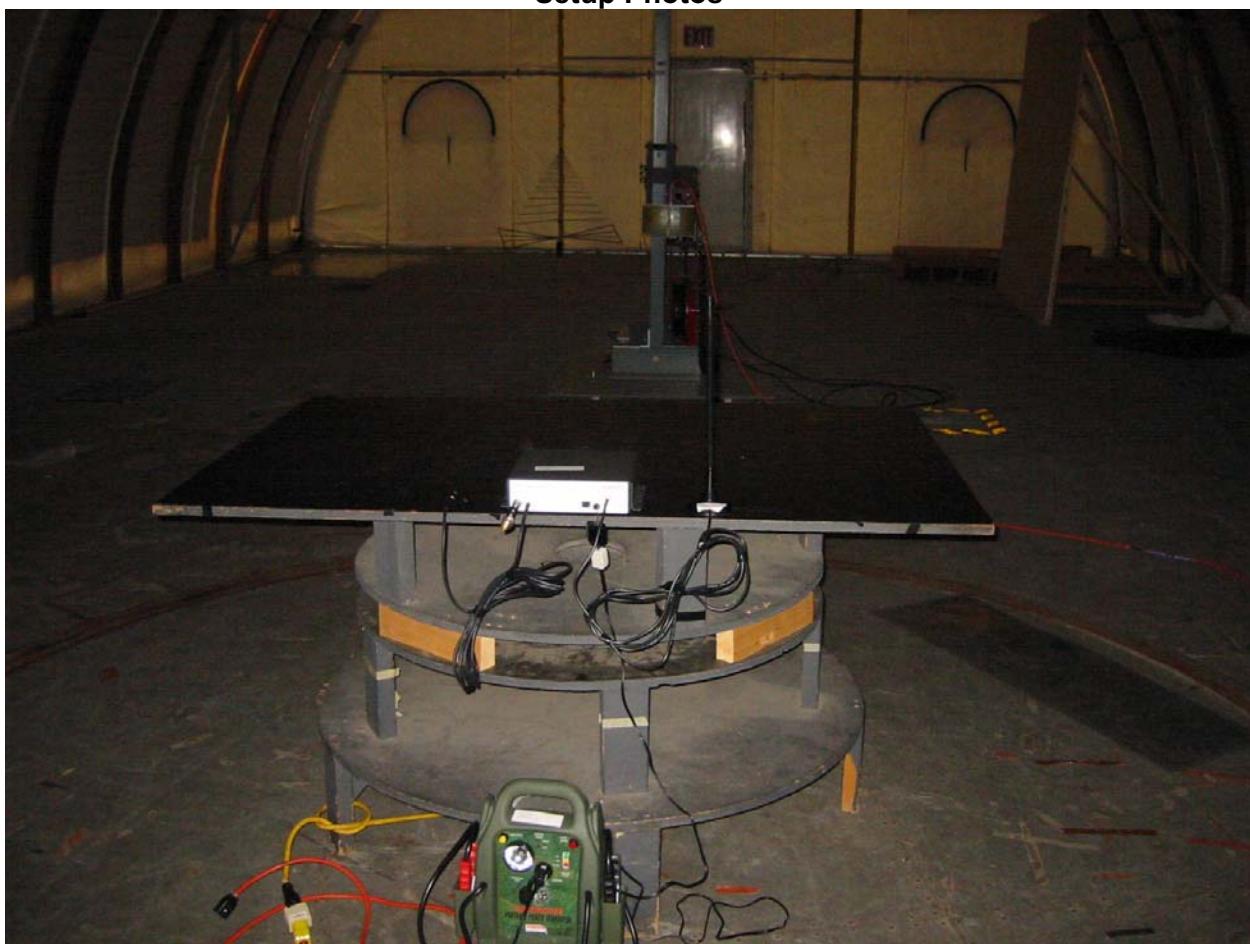
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