

Electronic Warfare Associates, Inc.

TEST REPORT FOR

**Access Point
Model: SKEY-SSRF**

Tested To The Following Standards:

**FCC Part 15 Subpart C Sections 15.207, 15.249
and
RSS 210 Issue 8**

Report No.: 94594-10

Date of issue: August 28, 2013



This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of EMC testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

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ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

Electronic Warfare Associates, Inc
13873 Park Center Road
Herndon, VA 20171

Representative: Jason Pizzillo
Customer Reference Number: P210000039

DATE OF EQUIPMENT RECEIPT:**DATE(S) OF TESTING:****REPORT PREPARED BY:**

Dianne Dudley
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Project Number: 94594

August 16, 2013

August 16-19, 2013

Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the sample equipment tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.

A handwritten signature in black ink that reads "Steve Behm".

Steve Behm
Director of Quality Assurance & Engineering Services
CKC Laboratories, Inc.

Test Facility Information



Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):
CKC Laboratories, Inc.
1120 Fulton Place
Fremont, CA 94539

Software Versions

| CKC Laboratories Proprietary Software | Version |
|---------------------------------------|---------|
| EMITest Emissions | 5.00.14 |
| Immunity | 5.00.07 |

Site Registration & Accreditation Information

| Location | CB # | TAIWAN | CANADA | FCC | JAPAN |
|----------|--------|----------------|---------|--------|--------|
| Fremont | US0082 | SL2-IN-E-1148R | 3082B-1 | 958979 | A-0149 |

SUMMARY OF RESULTS

Standard / Specification: FCC Part 15 Subpart C 15.207, 15.249 and RSS 210 Issue 8

| Description | Test Procedure/Method | Results |
|-----------------------------|--|---------|
| Conducted Emissions | FCC Part 15 Subpart C Section 15.207 / ANSI C63.4 / ANSI C63.10 | Pass |
| RF Power Output | FCC Part 15 Subpart C Section 15.249(a) / ANSI C63.4 / ANSI C63.10 | Pass |
| Voltage Variation | FCC Part 15 Subpart C Section 15.31(e) / ANSI C63.4 / ANSI C63.10 | Pass |
| -20dBc Occupied Bandwidth | FCC Part 15 Subpart C Section 15.215(c) / ANSI C63.4 / ANSI C63.10 | Pass |
| 99% Bandwidth | RSS GEN Section 4.6 | Pass |
| Radiated Spurious Emissions | FCC Part 15 Subpart C Section 15.249(a) / ANSI C63.4 / ANSI C63.10 | Pass |
| Band Edge | FCC Part 15 Subpart C Section 15.249(d) / ANSI C63.4 / ANSI C63.10 | Pass |

Conditions During Testing

This list is a summary of the conditions noted for or modifications made to the equipment during testing.

| Summary of Conditions |
|-----------------------|
| None |

EQUIPMENT UNDER TEST (EUT)

EQUIPMENT UNDER TEST

AC/DC Power Adapter

Manuf: Triad
Model: WSU075-1000
Serial: E345519

Access Point

Manuf: Electronic Warfare Associates, Inc.
Model: SKEY-SSRF
Serial: ENG1

PERIPHERAL DEVICES

The EUT was not tested with peripheral devices.

FCC PART 15 SUBPART C

This report contains EMC emissions test results under United States Federal Communications Commission (FCC) 47 CFR 15C requirements for Unlicensed Radio Frequency Devices, Subpart C - Intentional Radiators.

15.207 AC Conducted Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**

Specification: **15.207 AC Mains - Average**

Work Order #: **94594**

Date: 8/16/2013

Test Type: **Conducted Emissions**

Time: 09:16:47

Equipment: **Access Point**

Sequence#: 1

Manufacturer: Electronic Warfare Associates, Inc.

Tested By: Hieu Song Nguyenpham

Model: SKEY-SSRF

120V 60Hz

S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|--|-------------------------|------------------|--------------|
| T1 | ANP01211 | Attenuator | PE7002-10 | 4/2/2013 | 4/2/2015 |
| T2 | ANP00880 | Cable | RG214U | 7/30/2012 | 7/30/2014 |
| T3 | ANP05300 | Cable | RG214/U | 3/25/2013 | 3/25/2015 |
| T4 | AN00493 | 50uH LISN-L1 (L) Loss W/O European Adapter | 3816/NM | 3/4/2013 | 3/4/2015 |
| | AN00493 | 50uH LISN-L(2) N Loss W/O European Adapter | 3816/NM | 3/4/2013 | 3/4/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |
| T5 | ANP05258 | High Pass Filter | HE9615-150K- 50-720B | 12/6/2012 | 12/6/2014 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|--|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

Conducted Emission
Frequency Range: 150kHz to 30MHz

Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)
Temperature: 22.1°C
Humidity: 43%
Atmospheric Pressure: 101.2 kPa
High Clock: 26MHz

Transmitting operating frequency= 923MHz and 2481MHz
RF Output= 0dBm at the antenna feed point
Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)

The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive.

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

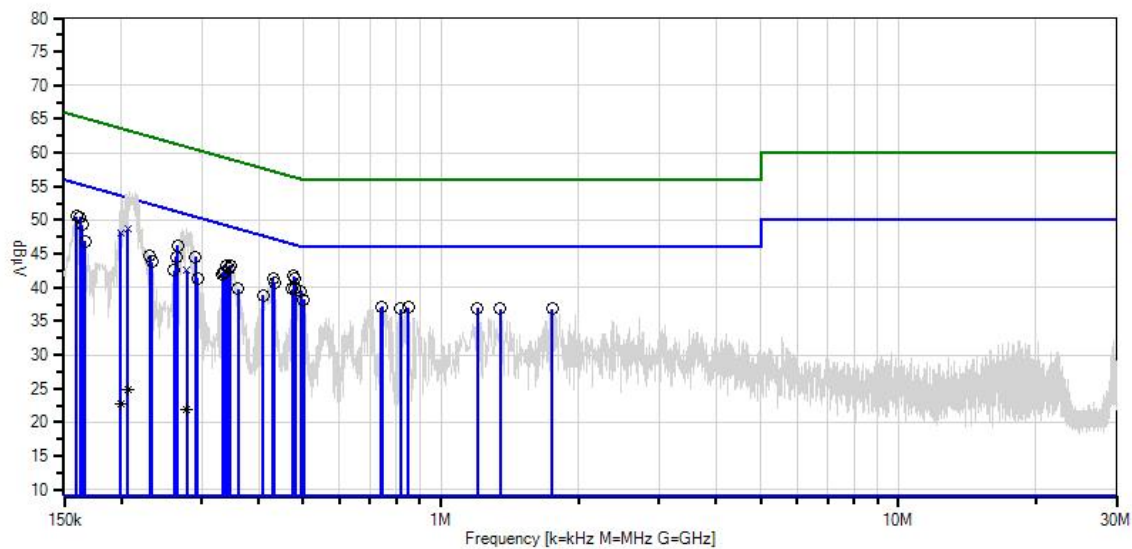
Test Lead: Black

| # | Freq MHz | Rdng dBμV | T1 T5 dB | T2 dB | T3 dB | T4 dB | Dist Table | Corr dBμV | Spec dBμV | Margin dB | Polar Ant |
|----|-------------|--------------|----------------|----------|----------|----------|---------------|--------------|--------------|--------------|--------------|
| 1 | 475.788k | 31.8 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 41.7 | 46.4 | -4.7 | Black |
| 2 | 162.363k | 40.3 | +9.6 +0.4 | +0.1 | +0.0 | +0.1 | +0.0 | 50.5 | 55.3 | -4.8 | Black |
| 3 | 159.454k | 40.5 | +9.6 +0.4 | +0.0 | +0.0 | +0.1 | +0.0 | 50.6 | 55.5 | -4.9 | Black |
| 4 | 480.152k | 31.5 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 41.4 | 46.3 | -4.9 | Black |
| 5 | 265.626k | 36.2 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 46.2 | 51.3 | -5.1 | Black |
| 6 | 346.346k | 33.4 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 43.3 | 49.0 | -5.7 | Black |
| 7 | 164.544k | 39.1 | +9.6 +0.4 | +0.1 | +0.0 | +0.1 | +0.0 | 49.3 | 55.2 | -5.9 | Black |
| 8 | 429.247k | 31.6 | +9.6 +0.0 | +0.1 | +0.0 | +0.1 | +0.0 | 41.4 | 47.3 | -5.9 | Black |
| 9 | 290.351k | 34.5 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 44.5 | 50.5 | -6.0 | Black |
| 10 | 339.801k | 33.3 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 43.2 | 49.2 | -6.0 | Black |
| 11 | 344.891k | 32.9 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 42.8 | 49.1 | -6.3 | Black |
| 12 | 432.156k | 30.9 | +9.6 +0.0 | +0.1 | +0.0 | +0.1 | +0.0 | 40.7 | 47.2 | -6.5 | Black |
| 13 | 477.970k | 29.9 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 39.8 | 46.4 | -6.6 | Black |
| 14 | 493.968k | 29.6 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 39.5 | 46.1 | -6.6 | Black |
| 15 | 263.444k | 34.6 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 44.6 | 51.3 | -6.7 | Black |

| | | | | | | | | | | | |
|----|-----------------|------|--------------|------|------|------|------|------|------|-------|-------|
| 16 | 473.607k | 29.9 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 39.8 | 46.5 | -6.7 | Black |
| 17 | 336.892k | 32.5 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 42.4 | 49.3 | -6.9 | Black |
| 18 | 334.710k | 32.3 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 42.2 | 49.3 | -7.1 | Black |
| 19 | 332.529k | 32.1 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 42.0 | 49.4 | -7.4 | Black |
| 20 | 231.447k | 34.8 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 44.8 | 52.4 | -7.6 | Black |
| 21 | 500.513k | 28.2 | +9.7 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 38.2 | 46.0 | -7.8 | Black |
| 22 | 166.726k | 36.7 | +9.6 +0.4 | +0.1 | +0.0 | +0.1 | +0.0 | 46.9 | 55.1 | -8.2 | Black |
| 23 | 233.629k | 33.8 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 43.8 | 52.3 | -8.5 | Black |
| 24 | 408.885k | 29.1 | +9.6 +0.0 | +0.1 | +0.0 | +0.1 | +0.0 | 38.9 | 47.7 | -8.8 | Black |
| 25 | 744.127k | 27.4 | +9.5 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 37.2 | 46.0 | -8.8 | Black |
| 26 | 360.163k | 29.9 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 39.8 | 48.7 | -8.9 | Black |
| 27 | 261.263k | 32.5 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 42.5 | 51.4 | -8.9 | Black |
| 28 | 847.391k | 27.1 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 37.1 | 46.0 | -8.9 | Black |
| 29 | 740.491k | 27.3 | +9.5 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 37.1 | 46.0 | -8.9 | Black |
| 30 | 293.260k | 31.4 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 41.4 | 50.4 | -9.0 | Black |
| 31 | 1.200M | 27.0 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 36.9 | 46.0 | -9.1 | Black |
| 32 | 816.848k | 26.8 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 36.8 | 46.0 | -9.2 | Black |
| 33 | 1.349M | 26.9 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 36.8 | 46.0 | -9.2 | Black |
| 34 | 1.749M | 26.9 | +9.6 +0.1 | +0.1 | +0.0 | +0.1 | +0.0 | 36.8 | 46.0 | -9.2 | Black |
| 35 | 207.078k QP | 38.7 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 48.7 | 63.3 | -14.6 | Black |
| 36 | 199.179k QP | 38.2 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 48.2 | 63.6 | -15.4 | Black |
| 37 | 278.159k QP | 32.5 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 42.5 | 60.9 | -18.4 | Black |
| 38 | 207.078k Ave | 14.9 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 24.9 | 53.3 | -28.4 | Black |
| ^ | 207.078k | 43.8 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 53.8 | 53.3 | +0.5 | Black |
| ^ | 207.078k | 43.7 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 53.7 | 53.3 | +0.4 | Black |
| 41 | 278.159k Ave | 11.8 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 21.8 | 50.9 | -29.1 | Black |

| | | | | | | | | | | | |
|-----------|----------|------|--------------|------|------|------|------|------|------|-------|-------|
| ^ | 278.159k | 38.7 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 48.7 | 50.9 | -2.2 | Black |
| ^ | 278.159k | 38.3 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 48.3 | 50.9 | -2.6 | Black |
| 44 Ave | 199.179k | 12.8 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 22.8 | 53.6 | -30.8 | Black |
| ^ | 199.179k | 44.2 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 54.2 | 53.6 | +0.6 | Black |
| ^ | 199.179k | 44.0 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 54.0 | 53.6 | +0.4 | Black |
| ^ | 196.541k | 38.4 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 48.4 | 53.8 | -5.4 | Black |
| ^ | 194.360k | 36.8 | +9.6 +0.2 | +0.1 | +0.0 | +0.1 | +0.0 | 46.8 | 53.8 | -7.0 | Black |

CKC Laboratories, Inc Date: 8/16/2013 Time: 09:16:47 Electronic Warfare Associates, Inc WO#: 94594
Test Lead: Black 120V 60Hz Sequence#: 1



— Sweep Data
○ Peak Readings
* Average Readings
— 1 - 15.207 AC Mains - Average
— Readings
× QP Readings
▼ Ambient
— 2 - 15.207 AC Mains - Quasi-peak

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**

Specification: **15.207 AC Mains - Average**

Work Order #: **94594**

Date: 8/16/2013

Test Type: **Conducted Emissions**

Time: 09:25:02

Equipment: **Access Point**

Sequence#: 2

Manufacturer: Electronic Warfare Associates, Inc.

Tested By: Hieu Song Nguyenpham

Model: SKEY-SSRF

120V 60Hz

S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|--|-------------------------|------------------|--------------|
| T1 | ANP01211 | Attenuator | PE7002-10 | 4/2/2013 | 4/2/2015 |
| T2 | ANP00880 | Cable | RG214U | 7/30/2012 | 7/30/2014 |
| T3 | ANP05300 | Cable | RG214/U | 3/25/2013 | 3/25/2015 |
| | AN00493 | 50uH LISN-L1 (L) Loss W/O European Adapter | 3816/NM | 3/4/2013 | 3/4/2015 |
| T4 | AN00493 | 50uH LISN-L(2) N Loss W/O European Adapter | 3816/NM | 3/4/2013 | 3/4/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |
| T5 | ANP05258 | High Pass Filter | HE9615-150K- 50-720B | 12/6/2012 | 12/6/2014 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|--|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

Conducted Emission
Frequency Range: 150kHz to 30MHz

Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)
Temperature: 22.1°C
Humidity: 43%
Atmospheric Pressure: 101.2 kPa
High Clock: 26MHz

Transmitting operating frequency= 923MHz and 2481MHz
RF Output= 0dBm at the antenna feed point
Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)

The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive.

Ext Attn: 0 dB

Measurement Data:

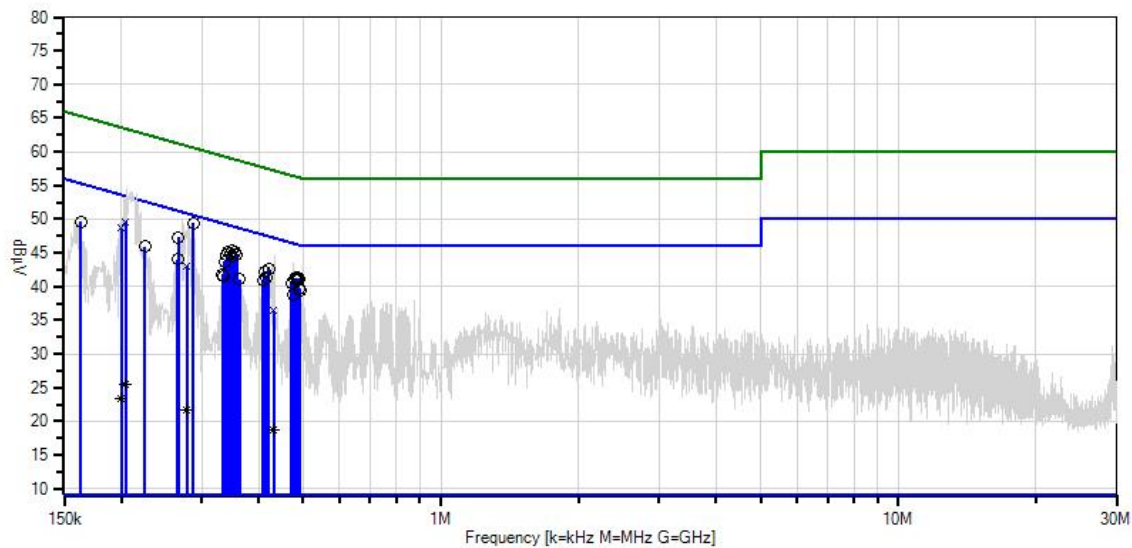
Reading listed by margin.

Test Lead: White

| # | Freq MHz | Rdng dB μ V | T1 T5 dB | T2 dB | T3 dB | T4 dB | Dist Table | Corr dB μ V | Spec dB μ V | Margin dB | Polar Ant |
|----|-------------|--------------------|----------------|----------|----------|----------|---------------|--------------------|--------------------|--------------|--------------|
| 1 | 287.503k | 38.9 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 49.4 | 50.6 | -1.2 | White |
| 2 | 355.071k | 34.7 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 45.1 | 48.8 | -3.7 | White |
| 3 | 348.526k | 34.9 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 45.3 | 49.0 | -3.7 | White |
| 4 | 267.079k | 36.8 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 47.3 | 51.2 | -3.9 | White |
| 5 | 342.709k | 34.8 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 45.2 | 49.1 | -3.9 | White |
| 6 | 357.980k | 34.4 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 44.8 | 48.8 | -4.0 | White |
| 7 | 347.072k | 34.5 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 44.9 | 49.0 | -4.1 | White |
| 8 | 339.800k | 34.3 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 44.7 | 49.2 | -4.5 | White |
| 9 | 349.981k | 34.1 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 44.5 | 49.0 | -4.5 | White |
| 10 | 420.520k | 32.3 | +9.6 +0.0 | +0.1 | +0.0 | +0.6 | +0.0 | 42.6 | 47.4 | -4.8 | White |
| 11 | 481.605k | 30.9 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 41.3 | 46.3 | -5.0 | White |
| 12 | 484.514k | 30.9 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 41.3 | 46.3 | -5.0 | White |
| 13 | 488.150k | 30.8 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 41.2 | 46.2 | -5.0 | White |
| 14 | 486.695k | 30.6 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 41.0 | 46.2 | -5.2 | White |
| 15 | 478.696k | 30.7 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 41.1 | 46.4 | -5.3 | White |
| 16 | 411.793k | 31.9 | +9.6 +0.0 | +0.1 | +0.0 | +0.6 | +0.0 | 42.2 | 47.6 | -5.4 | White |
| 17 | 336.891k | 33.3 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 43.7 | 49.3 | -5.6 | White |
| 18 | 163.089k | 38.9 | +9.6 +0.4 | +0.1 | +0.0 | +0.6 | +0.0 | 49.6 | 55.3 | -5.7 | White |
| 19 | 472.151k | 30.1 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 40.5 | 46.5 | -6.0 | White |
| 20 | 414.702k | 31.1 | +9.6 +0.0 | +0.1 | +0.0 | +0.6 | +0.0 | 41.4 | 47.6 | -6.2 | White |
| 21 | 490.331k | 29.3 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 39.7 | 46.2 | -6.5 | White |
| 22 | 491.786k | 29.1 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 39.5 | 46.1 | -6.6 | White |
| 23 | 225.628k | 35.4 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 45.9 | 52.6 | -6.7 | White |

| | | | | | | | | | | | |
|----|-----------------|------|--------------|------|------|------|------|------|------|-------|-------|
| 24 | 408.884k | 30.7 | +9.6 +0.0 | +0.1 | +0.0 | +0.6 | +0.0 | 41.0 | 47.7 | -6.7 | White |
| 25 | 265.625k | 33.5 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 44.0 | 51.3 | -7.3 | White |
| 26 | 332.528k | 31.4 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 41.8 | 49.4 | -7.6 | White |
| 27 | 362.343k | 30.7 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 41.1 | 48.7 | -7.6 | White |
| 28 | 334.709k | 31.2 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 41.6 | 49.3 | -7.7 | White |
| 29 | 474.333k | 28.3 | +9.6 +0.1 | +0.1 | +0.0 | +0.6 | +0.0 | 38.7 | 46.4 | -7.7 | White |
| 30 | 204.229k QP | 39.1 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 49.6 | 63.4 | -13.8 | White |
| 31 | 200.245k QP | 38.2 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 48.7 | 63.6 | -14.9 | White |
| 32 | 278.503k QP | 32.5 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 43.0 | 60.9 | -17.9 | White |
| 33 | 430.835k QP | 26.1 | +9.6 +0.0 | +0.1 | +0.0 | +0.6 | +0.0 | 36.4 | 57.2 | -20.8 | White |
| 34 | 204.229k Ave | 14.9 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 25.4 | 53.4 | -28.0 | White |
| 35 | 430.835k Ave | 8.5 | +9.6 +0.0 | +0.1 | +0.0 | +0.6 | +0.0 | 18.8 | 47.2 | -28.4 | White |
| ^ | 430.853k | 34.3 | +9.6 +0.0 | +0.1 | +0.0 | +0.6 | +0.0 | 44.6 | 47.2 | -2.6 | White |
| ^ | 430.835k | 34.0 | +9.6 +0.0 | +0.1 | +0.0 | +0.6 | +0.0 | 44.3 | 47.2 | -2.9 | White |
| ^ | 434.337k | 33.0 | +9.6 +0.0 | +0.1 | +0.0 | +0.6 | +0.0 | 43.3 | 47.2 | -3.9 | White |
| ^ | 427.064k | 32.9 | +9.6 +0.0 | +0.1 | +0.0 | +0.6 | +0.0 | 43.2 | 47.3 | -4.1 | White |
| ^ | 429.973k | 32.9 | +9.6 +0.0 | +0.1 | +0.0 | +0.6 | +0.0 | 43.2 | 47.3 | -4.1 | White |
| 41 | 278.503k Ave | 11.1 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 21.6 | 50.9 | -29.3 | White |
| ^ | 278.503k | 39.4 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 49.9 | 50.9 | -1.0 | White |
| 43 | 200.245k Ave | 12.8 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 23.3 | 53.6 | -30.3 | White |
| ^ | 204.229k | 43.9 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 54.4 | 53.4 | +1.0 | White |
| ^ | 200.245k | 44.1 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 54.6 | 53.6 | +1.0 | White |
| ^ | 200.245k | 44.1 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 54.6 | 53.6 | +1.0 | White |
| ^ | 204.229k | 43.6 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 54.1 | 53.4 | +0.7 | White |
| ^ | 197.995k | 39.0 | +9.6 +0.2 | +0.1 | +0.0 | +0.6 | +0.0 | 49.5 | 53.7 | -4.2 | White |

CKC Laboratories, Inc Date: 8/16/2013 Time: 09:25:02 Electronic Warfare Associates, Inc WO#: 94594
 Test Lead: White 120V 60Hz Sequence#: 2



| | |
|---------------------------------|------------------------------------|
| — Sweep Data | — Readings |
| ○ Peak Readings | × QP Readings |
| * Average Readings | ▼ Ambient |
| — 1 - 15.207 AC Mains - Average | — 2 - 15.207 AC Mains - Quasi-peak |

Test Setup Photos



15.249(a) RF Power Output

Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**

Specification: **15.249 Carrier and Spurious Emissions (902-928 MHz Transmitter)**

Work Order #: **94594** Date: 8/16/2013

Test Type: **Radiated Scan** Time: 10:21:59

Equipment: **Access Point** Sequence#: 5

Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham

Model: SKEY-SSRF

S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------|-----------|------------------|--------------|
| T1 | AN00852 | Biconilog Antenna | CBL 6111C | 11/28/2012 | 11/28/2014 |
| T2 | ANP00880 | Cable | RG214U | 7/30/2012 | 7/30/2014 |
| T3 | ANP05300 | Cable | RG214/U | 3/25/2013 | 3/25/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

Fundamental of the EUT

Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)

Temperature: 22.1°C

Humidity: 43%

Atmospheric Pressure: 101.2 kPa

High Clock: 26MHz

Transmitting operating frequency= 923MHz

RF Output= 0dBm at the antenna feed point

Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)

The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive.

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

| # | Freq MHz | Rdng dBμV | T1 dB | T2 dB | T3 dB | dB | Dist Table | Corr dBμV/m | Spec dBμV/m | Margin dB | Polar Ant |
|---|-------------|--------------|----------|----------|----------|----|---------------|----------------|----------------|--------------|--------------|
| 1 | 922.993M | 64.5 | +22.7 | +3.5 | +0.9 | | +0.0 | 91.6 | 94.0 | -2.4 | Horiz |
| 2 | 922.993M | 56.6 | +22.7 | +3.5 | +0.9 | | +0.0 | 83.7 | 94.0 | -10.3 | Vert |

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**
 Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**
 Work Order #: **94594** Date: 8/16/2013
 Test Type: **Radiated Scan** Time: 10:52:24
 Equipment: **Access Point** Sequence#: 6
 Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
 Model: **SKEY-SSRF**
 S/N: **ENG1**

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------------|--------------------------|------------------|--------------|
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |
| T1 | AN02157 | Horn Antenna-ANSI C63.5 | 3115 | 1/23/2013 | 1/23/2015 |
| T2 | AN03302 | Cable | 32026-29094K-29094K-72TC | 3/21/2012 | 3/21/2014 |
| T3 | ANP01210 | Cable | FSJ1P-50A-4A | 2/19/2013 | 2/19/2015 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

| |
|---|
| Fundamental of the EUT Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110) Temperature: 22.1°C Humidity: 43% Atmospheric Pressure: 101.2 kPa High Clock: 26MHz Transmitting operating frequency= 2481MHz RF Output= 0dBm at the antenna feed point Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz) The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive |
|---|

Ext Attn: 0 dB

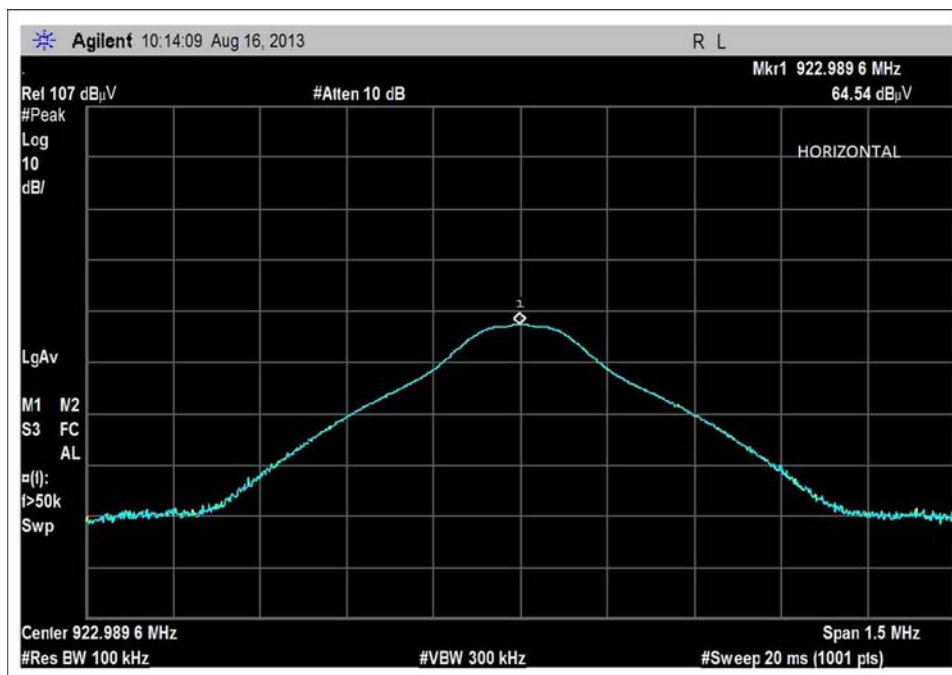
Measurement Data:

Reading listed by margin.

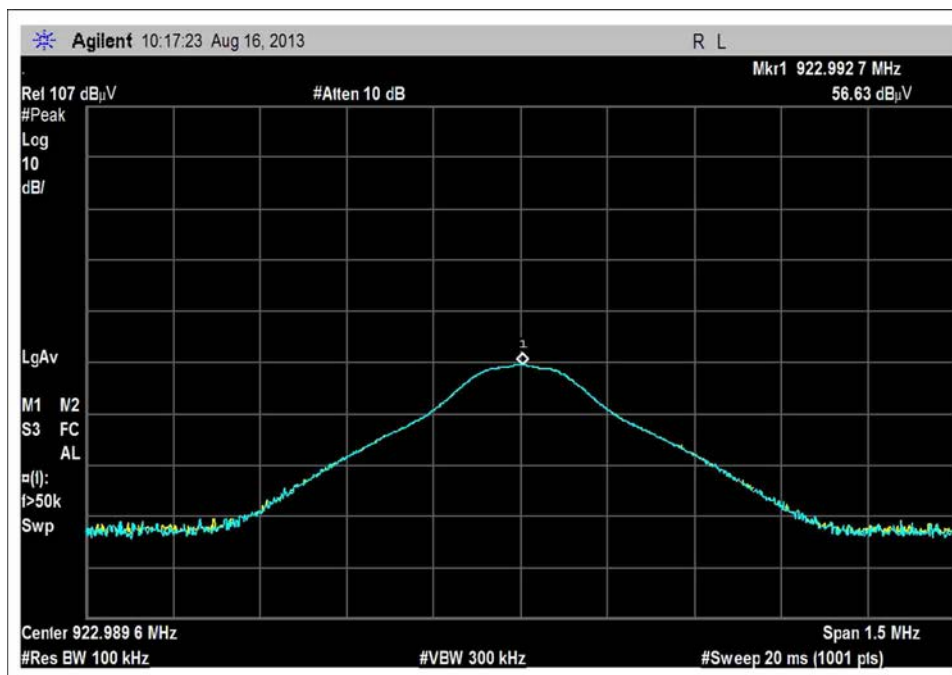
Test Distance: 3 Meters

| # | Freq MHz | Rdng dBμV | T1 dB | T2 dB | T3 dB | dB | Dist Table | Corr dBμV/m | Spec dBμV/m | Margin dB | Polar Ant |
|---|-----------|-----------|-------|-------|-------|----|------------|-------------|-------------|-----------|-----------|
| 1 | 2481.070M | 55.5 | +28.9 | +1.1 | +2.7 | | +0.0 | 88.2 | 94.0 | -5.8 | Horiz |
| 2 | 2481.070M | 49.4 | +28.9 | +1.1 | +2.7 | | +0.0 | 82.1 | 94.0 | -11.9 | Vert |

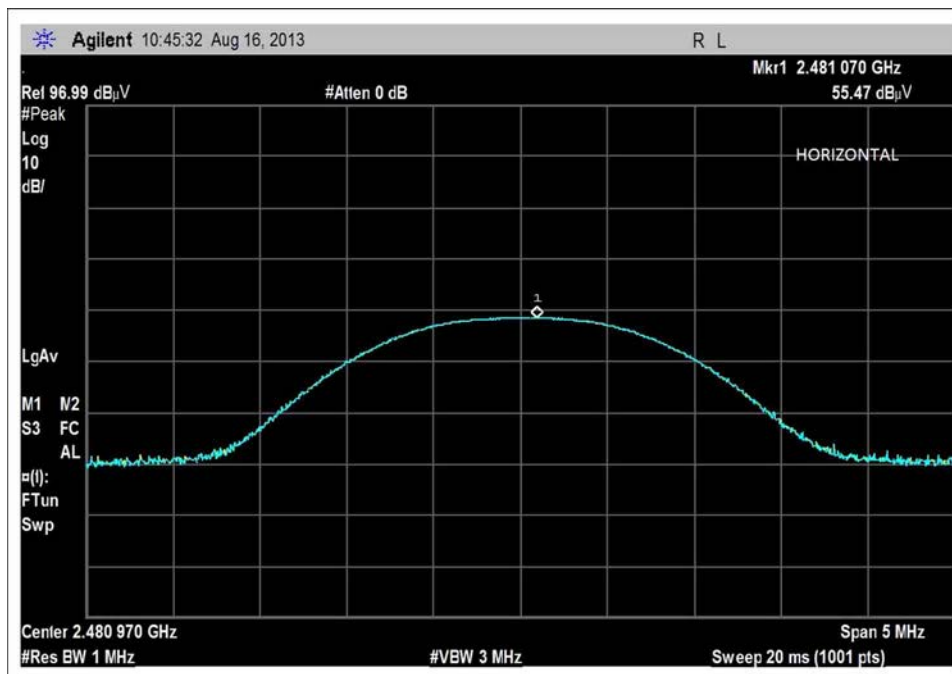
Test Data



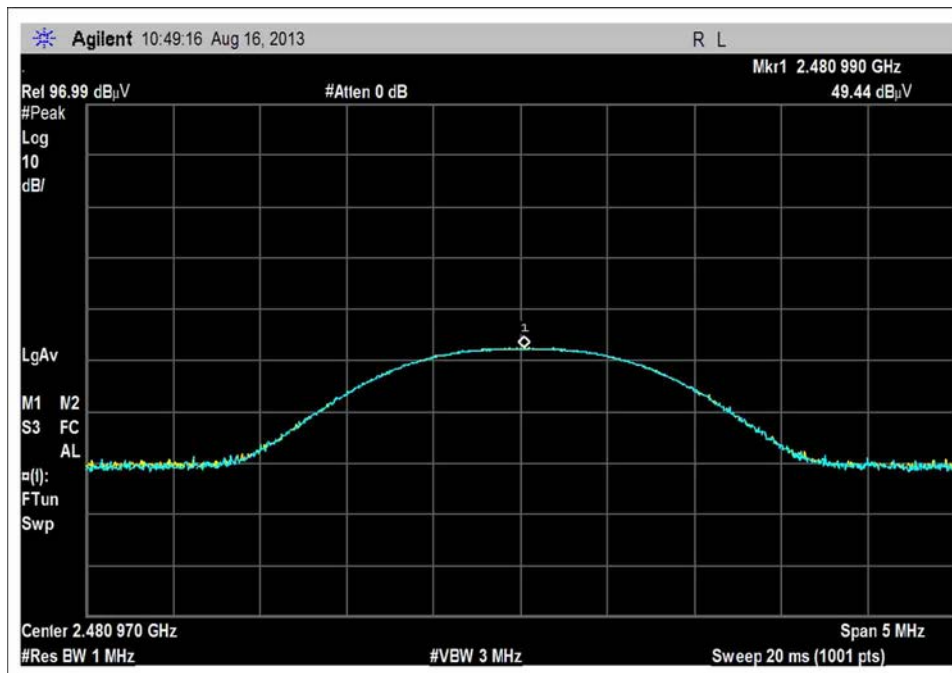
923MHz, Horizontal



923MHz, Vertical



2481MHz, Horizontal

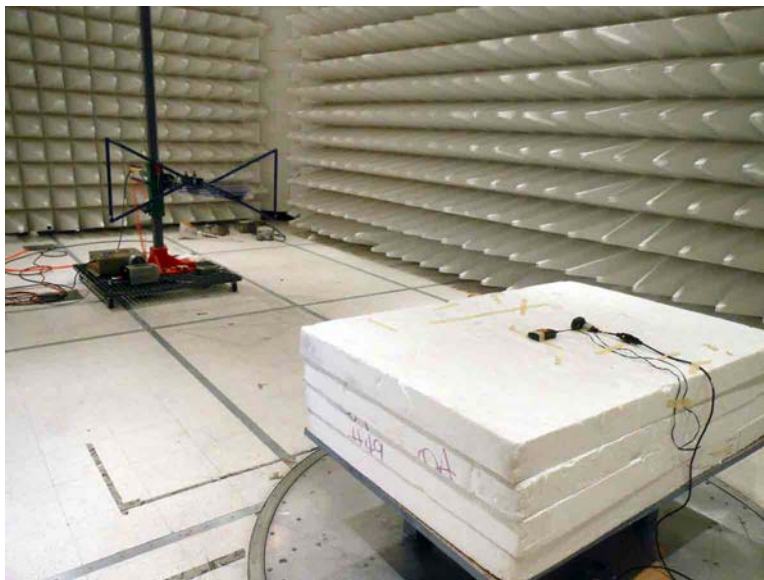


2481MHz, Vertical

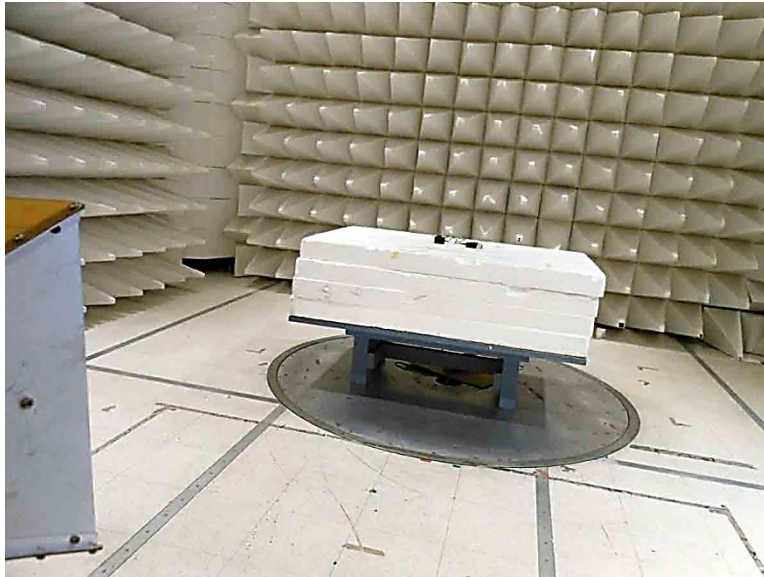
Test Setup Photos



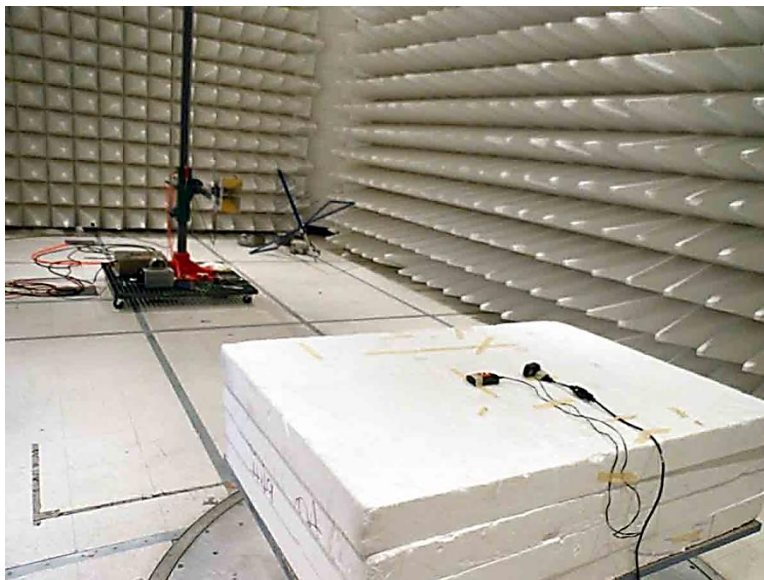
923MHz



923MHz



2481MHz



2481MHz

15.31(e) Voltage Variations

Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**

Specification: **15.31e**

Work Order #: **94594**

Date: 8/16/2013

Test Type: **Radiated Scan**

Time: 10:21:59

Equipment: **Access Point**

Sequence#: 5

Manufacturer: Electronic Warfare Associates, Inc.

Tested By: Hieu Song Nguyenpham

Model: SKEY-SSRF

S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------------|--------------------------|------------------|--------------|
| T1 | AN00852 | Biconilog Antenna | CBL 6111C | 11/28/2012 | 11/28/2014 |
| T2 | ANP00880 | Cable | RG214U | 7/30/2012 | 7/30/2014 |
| T3 | ANP05300 | Cable | RG214/U | 3/25/2013 | 3/25/2015 |
| T4 | AN02157 | Horn Antenna-ANSI C63.5 | 3115 | 1/23/2013 | 1/23/2015 |
| T5 | AN03302 | Cable | 32026-29094K-29094K-72TC | 3/21/2012 | 3/21/2014 |
| T6 | ANP01210 | Cable | FSJ1P-50A-4A | 2/19/2013 | 2/19/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

15.31e Set up. Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)
 Temperature: 22.1°C, Humidity: 43%, Atmospheric Pressure: 101.2 kPa
 High Clock: 26MHz
 Transmitting operating frequency= 923MHz and 2481MHz
 RF Output= 0dBm at the antenna feed point
 Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)
 The EUT is a fixed device. It is placed on the 80 cm Styrofoam table. The EUT is set in continuously transmit or receive. 15.31e: adjust the power voltage +/- 15% (102V and 138V) the RF output power is not changing.

Test Setup Photos



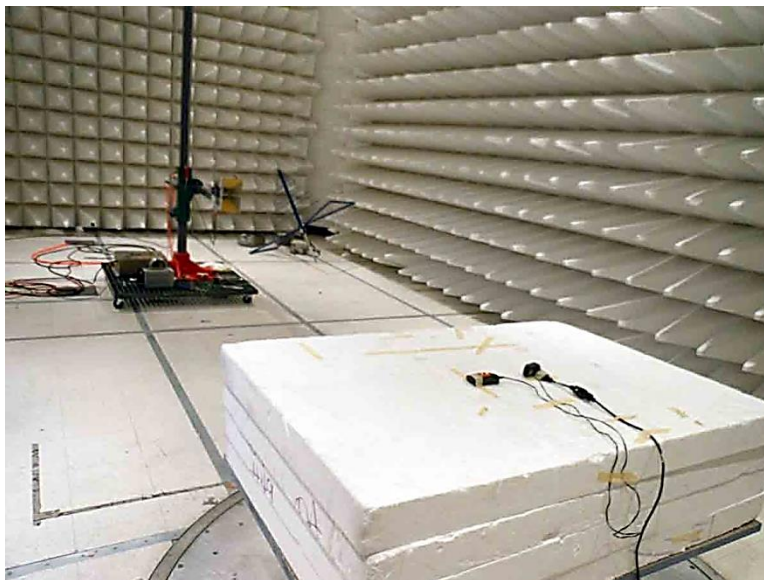
923MHz



923MHz



2481MHz



2481MHz

-20dBc Occupied Bandwidth

Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**

Specification: **OBW Set up**

Work Order #: **94594**

Date: 8/16/2013

Test Type: **Radiated Scan**

Time: 10:21:59

Equipment: **Access Point**

Sequence#: 5

Manufacturer: Electronic Warfare Associates, Inc.

Tested By: Hieu Song Nguyenpham

Model: SKEY-SSRF

S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------------|--------------------------|------------------|--------------|
| T1 | AN00852 | Biconilog Antenna | CBL 6111C | 11/28/2012 | 11/28/2014 |
| T2 | ANP00880 | Cable | RG214U | 7/30/2012 | 7/30/2014 |
| T3 | ANP05300 | Cable | RG214/U | 3/25/2013 | 3/25/2015 |
| T4 | AN02157 | Horn Antenna-ANSI C63.5 | 3115 | 1/23/2013 | 1/23/2015 |
| T5 | AN03302 | Cable | 32026-29094K-29094K-72TC | 3/21/2012 | 3/21/2014 |
| T6 | ANP01210 | Cable | FSJ1P-50A-4A | 2/19/2013 | 2/19/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

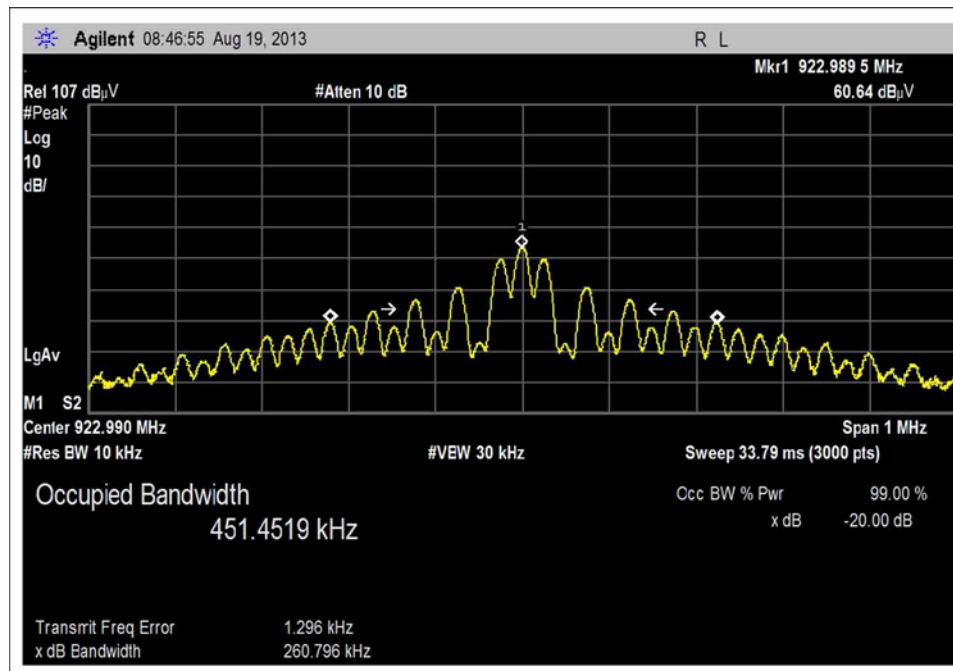
Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

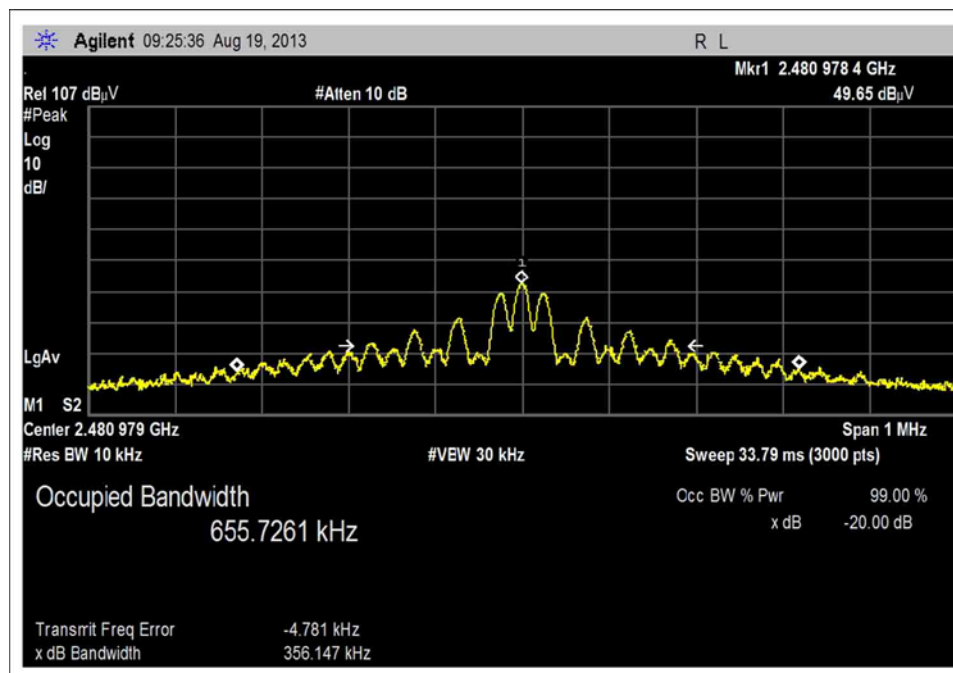
Test Conditions / Notes:

OBW Set up. Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)
 Temperature: 22.1°C, Humidity: 43%, Atmospheric Pressure: 101.2 kPa
 High Clock: 26MHz
 Transmitting operating frequency= 923MHz and 2481MHz; RF Output= 0dBm at the antenna feed point
 Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)
 The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive.

Test Data



923MHz

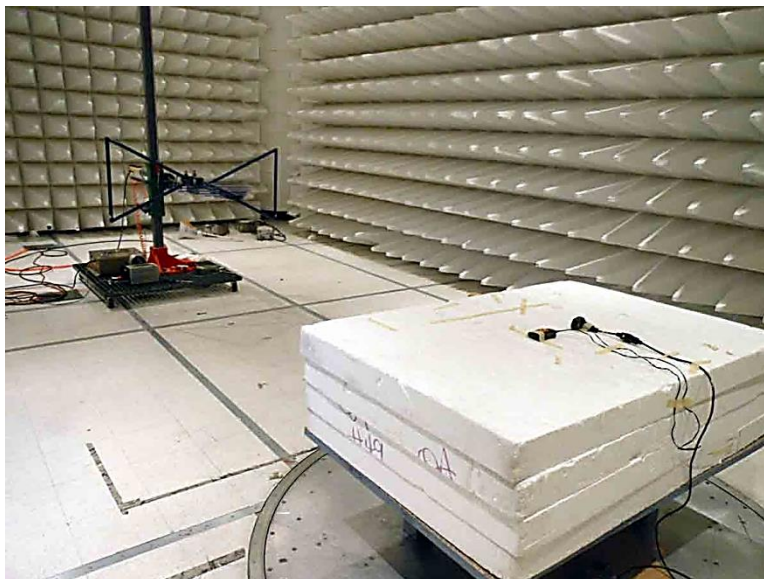


2481MHz

Test Setup Photos



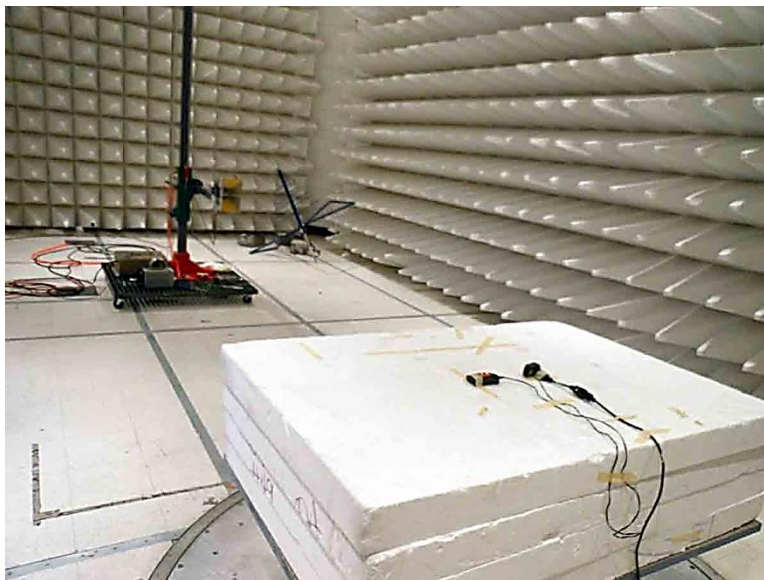
923MHz



923MHz



2481MHz



2481MHz

RSS-210 99 % Bandwidth

Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**

Specification: **OBW Set up**

Work Order #: **94594**

Date: 8/16/2013

Test Type: **Radiated Scan**

Time: 10:21:59

Equipment: **Access Point**

Sequence#: 5

Manufacturer: Electronic Warfare Associates, Inc.

Tested By: Hieu Song Nguyenpham

Model: SKEY-SSRF

S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------------|--------------------------|------------------|--------------|
| T1 | AN00852 | Biconilog Antenna | CBL 6111C | 11/28/2012 | 11/28/2014 |
| T2 | ANP00880 | Cable | RG214U | 7/30/2012 | 7/30/2014 |
| T3 | ANP05300 | Cable | RG214/U | 3/25/2013 | 3/25/2015 |
| T4 | AN02157 | Horn Antenna-ANSI C63.5 | 3115 | 1/23/2013 | 1/23/2015 |
| T5 | AN03302 | Cable | 32026-29094K-29094K-72TC | 3/21/2012 | 3/21/2014 |
| T6 | ANP01210 | Cable | FSJ1P-50A-4A | 2/19/2013 | 2/19/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

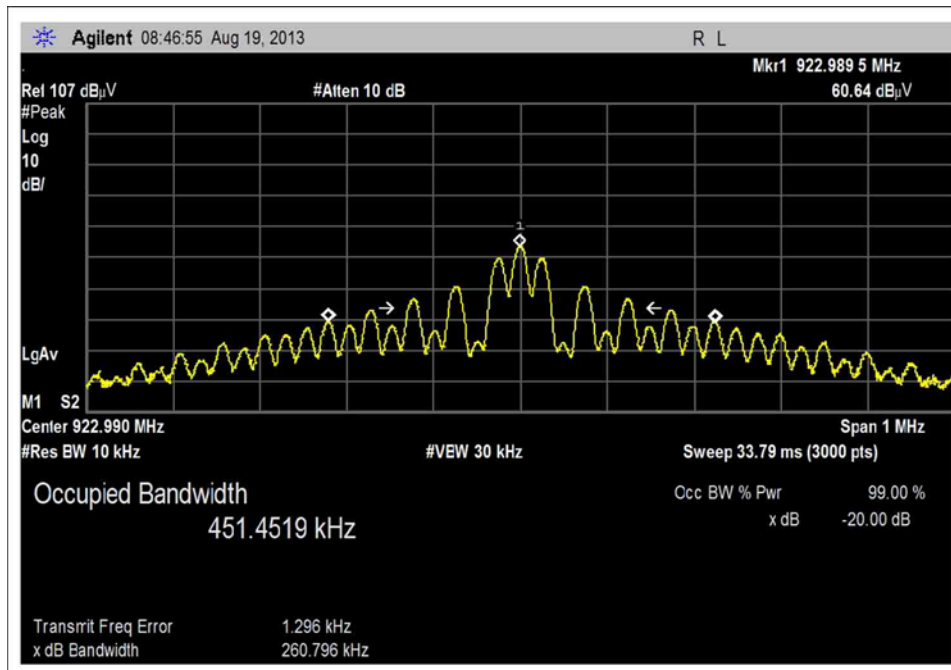
Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

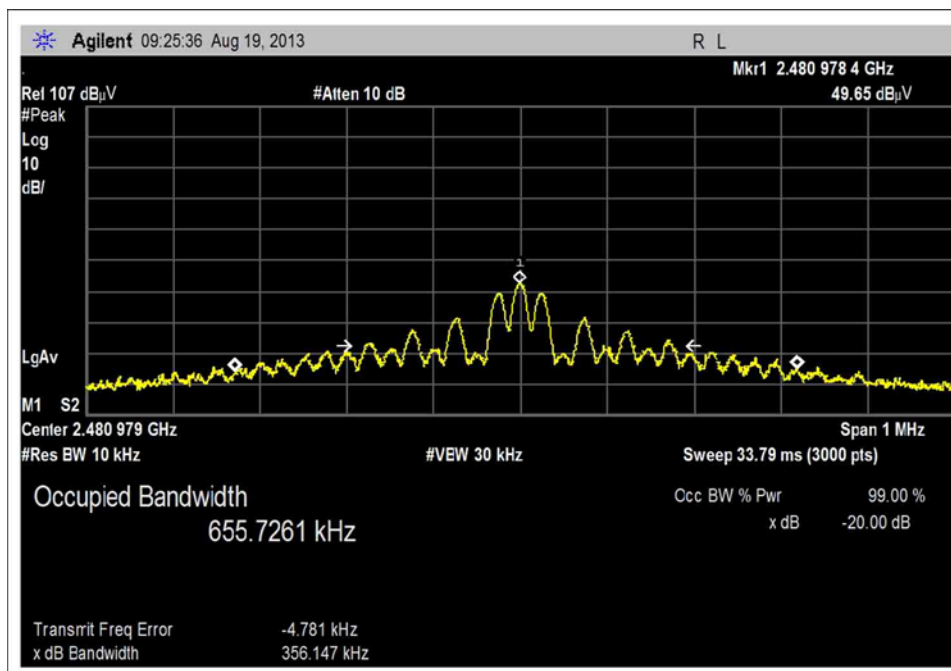
Test Conditions / Notes:

OBW Set up. Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)
 Temperature: 22.1°C, Humidity: 43%, Atmospheric Pressure: 101.2 kPa
 High Clock: 26MHz
 Transmitting operating frequency= 923MHz and 2481MHz; RF Output= 0dBm at the antenna feed point
 Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)
 The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive.

Test Data



923MHz



2481MHz

Test Setup Photos



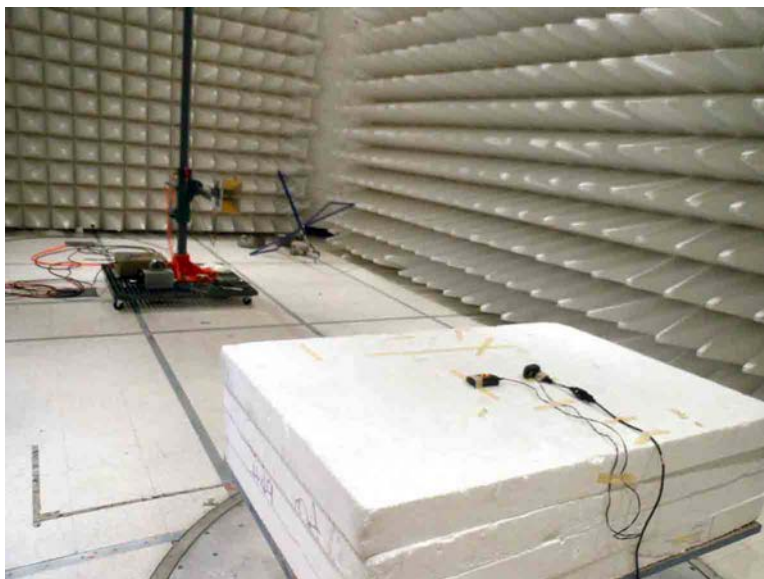
923MHz



923MHz



2481MHz



2481MHz

15.249(a) Radiated Spurious Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**

Specification: **15.249 Carrier and Spurious Emissions (902-928 MHz Transmitter)**

Work Order #: **94594**

Date: 8/19/2013

Test Type: **Radiated Scan**

Time: 08:41:43

Equipment: **Access Point**

Sequence#: 30

Manufacturer: Electronic Warfare Associates, Inc.

Tested By: Hieu Song Nguyenpham

Model: SKEY-SSRF

S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------|---------|------------------|--------------|
| T1 | AN00432 | Loop Antenna | 6502 | 4/2/2013 | 4/2/2015 |
| T2 | ANP00880 | Cable | RG214U | 7/30/2012 | 7/30/2014 |
| T3 | ANP05300 | Cable | RG214/U | 3/25/2013 | 3/25/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

Radiated Spurious Emission
Frequency Range: 9kHz to 30MHz
Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)
Temperature: 22.1°C, Humidity: 43%, Atmospheric Pressure: 101.2 kPa
High Clock: 26MHz

Transmitting operating frequency= 923MHz and 2481MHz
RF Output= 0dBm at the antenna feed point
Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)

9 kHz -150 kHz; RBW=200Hz, VBW=200 Hz; 150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz; 30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz, 1000 MHz-10000MHz: RBW=1 MHz, VBW=1 MHz.

The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive
Note: Channel 923MHz

Ext Attn: 0 dB

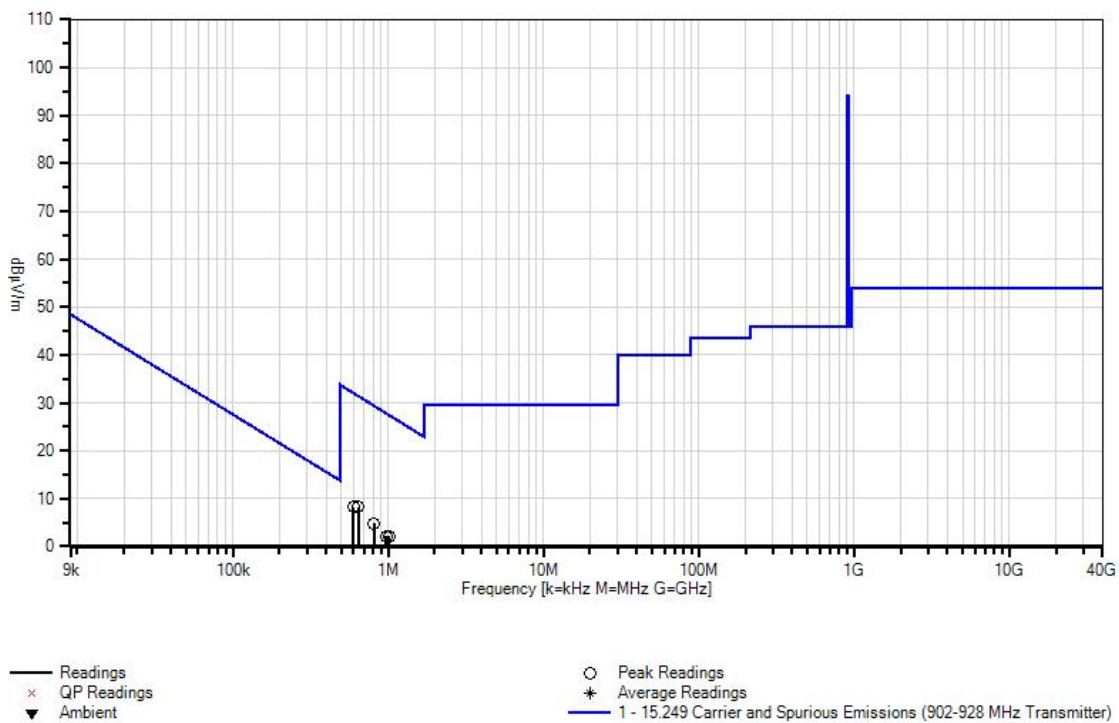
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

| # | Freq MHz | Rdng dB μ V | T1 dB | T2 dB | T3 dB | | Dist Table | Corr dB μ V/m | Spec dB μ V/m | Margin dB | Polar Ant |
|---|-------------|--------------------|----------|----------|----------|--|---------------|----------------------|----------------------|--------------|--------------|
| 1 | 645.496k | 38.4 | +9.8 | +0.1 | +0.0 | | -40.0 | 8.3 | 31.4 | -23.1 | Paral |
| 2 | 597.410k | 38.4 | +9.8 | +0.1 | +0.0 | | -40.0 | 8.3 | 32.1 | -23.8 | Perpe |
| 3 | 808.571k | 35.4 | +9.4 | +0.1 | +0.0 | | -40.0 | 4.9 | 29.4 | -24.5 | Paral |
| 4 | 1.016M | 32.3 | +9.7 | +0.1 | +0.0 | | -40.0 | 2.1 | 27.4 | -25.3 | Paral |
| 5 | 971.646k | 32.4 | +9.6 | +0.1 | +0.0 | | -40.0 | 2.1 | 27.8 | -25.7 | Perpe |
| 6 | 1.639M | 26.4 | +9.8 | +0.1 | +0.0 | | -40.0 | -3.7 | 23.2 | -26.9 | Perpe |

CKC Laboratories, Inc Date: 8/19/2013 Time: 08:41:43 Electronic Warfare Associates, Inc WO#: 94594
Test Distance: 3 Meters Sequence#: 30



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**
 Specification: **15.249 Carrier and Spurious Emissions (902-928 MHz Transmitter)**
 Work Order #: **94594** Date: 8/16/2013
 Test Type: **Radiated Scan** Time: 11:48:23
 Equipment: **Access Point** Sequence#: 9
 Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
 Model: SKEY-SSRF
 S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------|-----------|------------------|--------------|
| T1 | AN00852 | Biconilog Antenna | CBL 6111C | 11/28/2012 | 11/28/2014 |
| T2 | ANP00880 | Cable | RG214U | 7/30/2012 | 7/30/2014 |
| T3 | ANP05300 | Cable | RG214/U | 3/25/2013 | 3/25/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |
| T4 | AN00730 | Preamplifier | 8447D | 1/17/2013 | 1/17/2015 |
| T5 | ANP01183 | Cable | CNT-195 | 10/24/2011 | 10/24/2013 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

| |
|--|
| <p>Radiated Spurious Emission Frequency Range: 30MHz to 1000MHz Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110) Temperature: 22.1°C, Humidity: 43%, Atmospheric Pressure: 101.2 kPa High Clock: 26MHz</p> <p>Transmitting operating frequency= 923MHz and 2481MHz RF Output= 0dBm at the antenna feed point Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)</p> <p>9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz; 150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz; 30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz, 1000 MHz-10000MHz; RBW=1 MHz, VBW=1 MHz.</p> <p>The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive</p> <p>Note: Channel 923MHz</p> |
|--|

Ext Attn: 0 dB

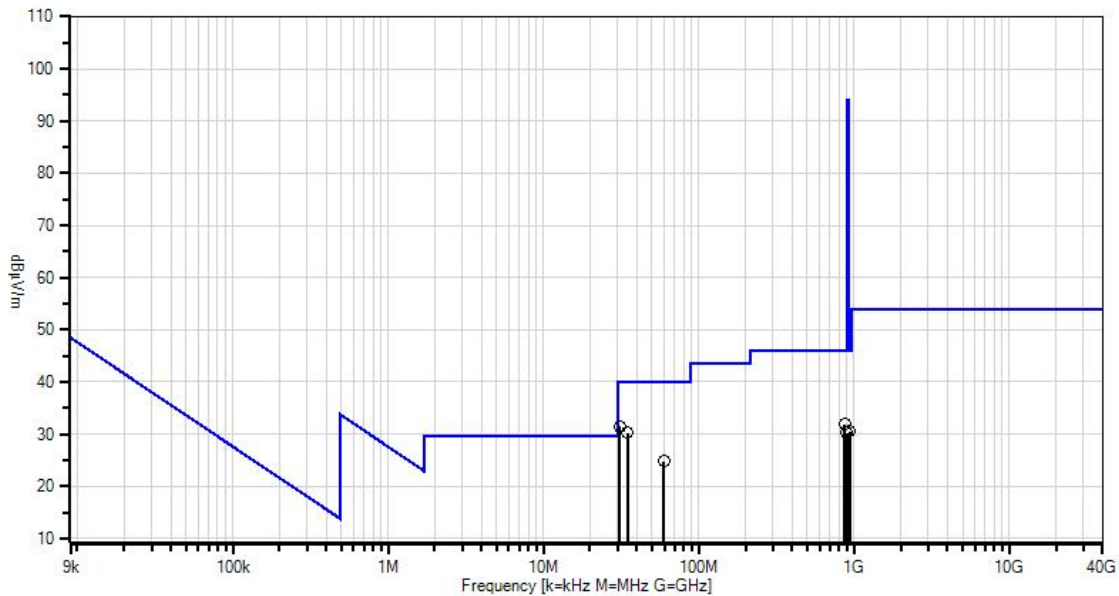
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

| # | Freq MHz | Rdng dB μ V | T1 T5 dB | T2 dB | T3 dB | T4 dB | Dist Table | Corr dB μ V/m | Spec dB μ V/m | Margin dB | Polar Ant |
|---|-------------|--------------------|----------------|----------|----------|----------|---------------|----------------------|----------------------|--------------|--------------|
| 1 | 30.998M | 39.9 | +17.8 +0.2 | +0.5 | +0.1 | -27.1 | +0.0 | 31.4 | 40.0 | -8.6 | Vert |
| 2 | 34.792M | 40.6 | +15.9 +0.1 | +0.5 | +0.1 | -27.0 | +0.0 | 30.2 | 40.0 | -9.8 | Vert |
| 3 | 870.963M | 30.6 | +23.0 +0.9 | +3.4 | +0.9 | -27.0 | +0.0 | 31.8 | 46.0 | -14.2 | Horiz |
| 4 | 59.947M | 45.1 | +5.8 +0.1 | +0.7 | +0.2 | -27.1 | +0.0 | 24.8 | 40.0 | -15.2 | Vert |
| 5 | 936.308M | 29.1 | +23.1 +1.0 | +3.5 | +0.9 | -27.1 | +0.0 | 30.5 | 46.0 | -15.5 | Horiz |
| 6 | 898.350M | 29.1 | +22.9 +1.0 | +3.4 | +0.9 | -27.1 | +0.0 | 30.2 | 46.0 | -15.8 | Horiz |

CKC Laboratories, Inc Date: 8/16/2013 Time: 11:48:23 Electronic Warfare Associates, Inc WO#: 94594
Test Distance: 3 Meters Sequence#: 9



— Readings
× QP Readings
▼ Ambient

○ Peak Readings
* Average Readings
— 1 - 15.249 Carrier and Spurious Emissions (902-928 MHz Transmitter)

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**
 Specification: **15.249 Carrier and Spurious Emissions (902-928 MHz Transmitter)**
 Work Order #: **94594** Date: 8/16/2013
 Test Type: **Radiated Scan** Time: 14:12:24
 Equipment: **Access Point** Sequence#: 15
 Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
 Model: SKEY-SSRF
 S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------------|--------------------------|------------------|--------------|
| T1 | AN03114 | Preamp | AMF-7D-00101800-30-10P | 4/11/2013 | 4/11/2015 |
| T2 | AN02157 | Horn Antenna-ANSI C63.5 | 3115 | 1/23/2013 | 1/23/2015 |
| T3 | AN03015 | Cable | 32022-2-29094K-24TC | 5/6/2013 | 5/6/2015 |
| T4 | AN03302 | Cable | 32026-29094K-29094K-72TC | 3/21/2012 | 3/21/2014 |
| T5 | ANP01210 | Cable | FSJ1P-50A-4A | 2/19/2013 | 2/19/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |
| T6 | AN03172 | High Pass Filter | HM1155-11SS | 2/9/2012 | 2/9/2014 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

Radiated Spurious Emission
 Frequency Range: 1000MHz to 10000MHz
 Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)
 Temperature: 22.1°C, Humidity: 43%, Atmospheric Pressure: 101.2 kPa
 High Clock: 26MHz

Transmitting operating frequency= 923MHz and 2481MHz
 RF Output= 0dBm at the antenna feed point
 Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)

9 kHz-150 kHz; RBW=200 Hz, VBW=200 Hz;
 150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz;
 30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz,
 1000 MHz-10000MHz; RBW=1 MHz, VBW=1 MHz.

The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive.
 Note: Channel 923MHz

Ext Attn: 0 dB

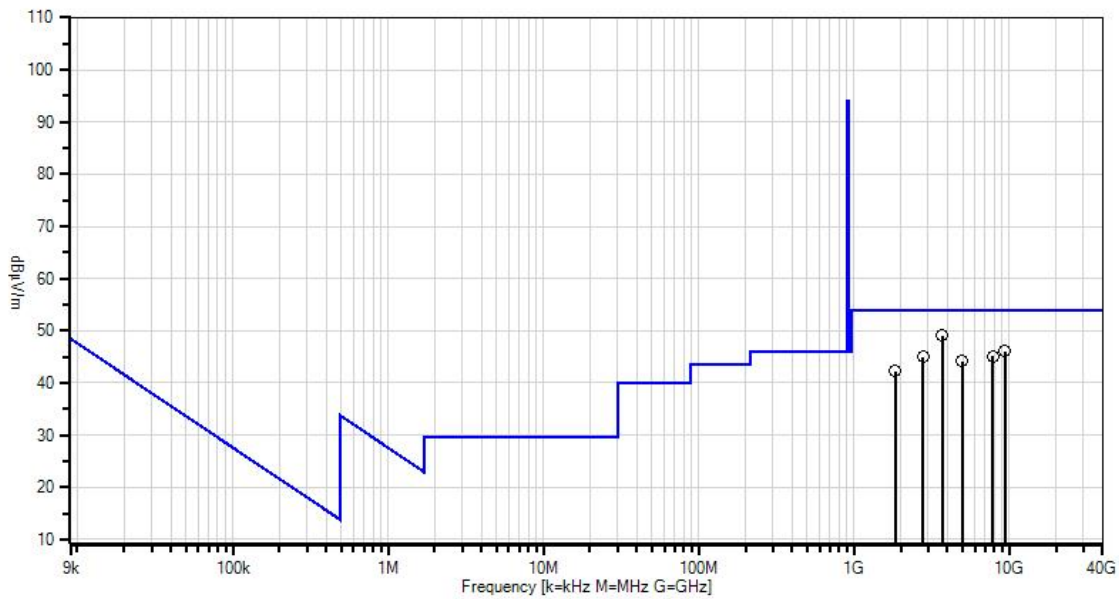
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

| # | Freq MHz | Rdng dB μ V | T1 T5 dB | T2 T6 dB | T3 dB | T4 dB | Dist Table | Corr dB μ V/m | Spec dB μ V/m | Margin dB | Polar Ant |
|---|-------------|--------------------|----------------|----------------|----------|----------|---------------|----------------------|----------------------|--------------|--------------|
| 1 | 3691.689M | 71.2 | -59.3 +3.2 | +31.9 +0.2 | +0.5 | +1.3 | +0.0 | 49.0 | 54.0 | -5.0 | Vert |
| 2 | 9322.464M | 55.1 | -57.2 +6.2 | +38.4 +0.2 | +1.2 | +2.2 | +0.0 | 46.1 | 54.0 | -7.9 | Vert |
| 3 | 7812.806M | 58.1 | -58.5 +5.5 | +36.6 +0.2 | +1.2 | +2.0 | +0.0 | 45.1 | 54.0 | -8.9 | Vert |
| 4 | 2768.767M | 70.0 | -59.0 +2.8 | +29.2 +0.2 | +0.5 | +1.2 | +0.0 | 44.9 | 54.0 | -9.1 | Horiz |
| 5 | 4960.957M | 62.1 | -57.9 +3.9 | +33.6 +0.2 | +0.7 | +1.6 | +0.0 | 44.2 | 54.0 | -9.8 | Horiz |
| 6 | 1845.845M | 70.4 | -58.8 +2.1 | +27.1 +0.3 | +0.3 | +0.9 | +0.0 | 42.3 | 54.0 | -11.7 | Horiz |

CKC Laboratories, Inc Date: 8/16/2013 Time: 14:12:24 Electronic Warfare Associates, Inc WO#: 94594
Test Distance: 3 Meters Sequence#: 15



— Readings
× QP Readings
▼ Ambient
○ Peak Readings
* Average Readings
— 1 - 15.249 Carrier and Spurious Emissions (902-928 MHz Transmitter)

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**
 Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**
 Work Order #: **94594** Date: 8/16/2013
 Test Type: **Radiated Scan** Time: 16:49:41
 Equipment: **Access Point** Sequence#: 27
 Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
 Model: SKEY-SSRF
 S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------|---------|------------------|--------------|
| T1 | AN00432 | Loop Antenna | 6502 | 4/2/2013 | 4/2/2015 |
| T2 | ANP00880 | Cable | RG214U | 7/30/2012 | 7/30/2014 |
| T3 | ANP05300 | Cable | RG214/U | 3/25/2013 | 3/25/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

| |
|--|
| <p>Radiated Spurious Emission Frequency Range: 9kHz to 30MHz Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110) Temperature: 22.1°C, Humidity: 43%, Atmospheric Pressure: 101.2 kPa High Clock: 26MHz</p> <p>Transmitting operating frequency= 923MHz and 2481MHz RF Output= 0dBm at the antenna feed point Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)</p> <p>9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz; 150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz; 30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz, 1000 MHz-25000MHz; RBW=1 MHz, VBW=1 MHz.</p> <p>The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive</p> <p>Note: Channel 2481MHz</p> |
|--|

Ext Attn: 0 dB

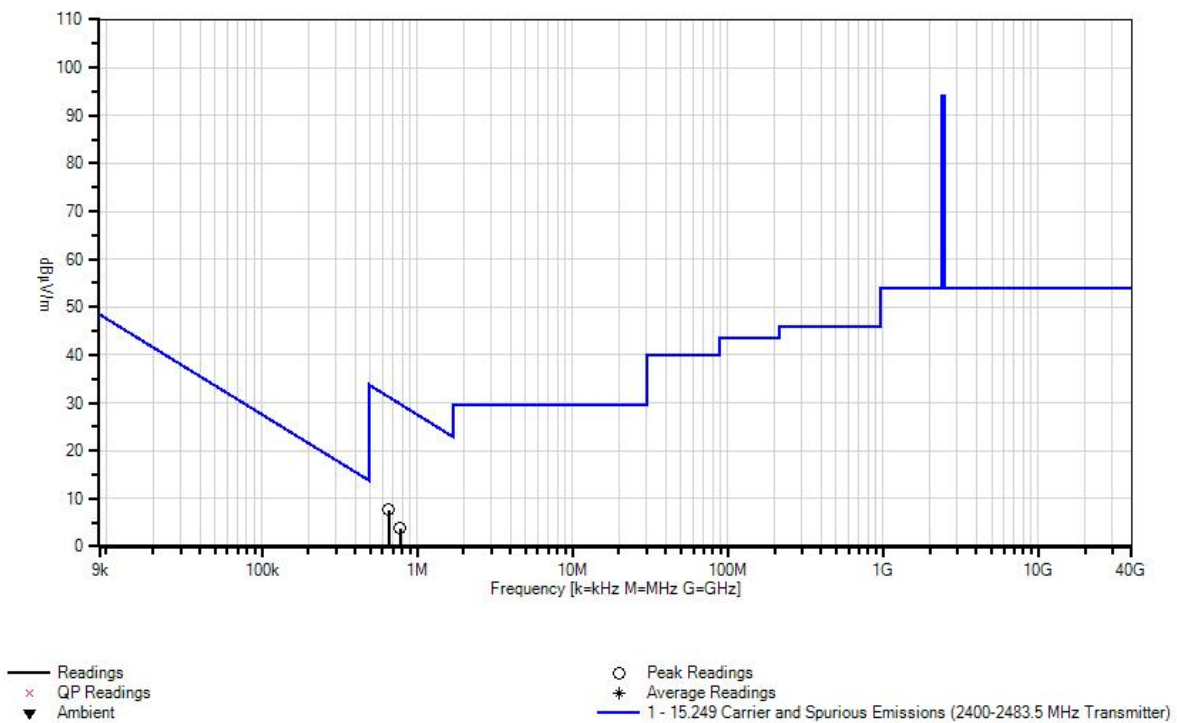
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

| # | Freq MHz | Rdng dB μ V | T1 dB | T2 dB | T3 dB | | Dist Table | Corr dB μ V/m | Spec dB μ V/m | Margin dB | Polar Ant |
|---|-------------|--------------------|----------|----------|----------|--|---------------|----------------------|----------------------|--------------|--------------|
| 1 | 658.041k | 37.6 | +9.9 | +0.1 | +0.0 | | -40.0 | 7.6 | 31.2 | -23.6 | Perpe |
| 2 | 779.759k | 34.2 | +9.5 | +0.1 | +0.0 | | -40.0 | 3.8 | 29.7 | -25.9 | Paral |
| 3 | 1.124M | 29.9 | +9.7 | +0.1 | +0.0 | | -40.0 | -0.3 | 26.5 | -26.8 | Perpe |
| 4 | 1.316M | 28.0 | +9.8 | +0.1 | +0.0 | | -40.0 | -2.1 | 25.2 | -27.3 | Paral |
| 5 | 1.576M | 26.0 | +9.8 | +0.1 | +0.0 | | -40.0 | -4.1 | 23.6 | -27.7 | Perpe |
| 6 | 1.478M | 26.6 | +9.8 | +0.1 | +0.0 | | -40.0 | -3.5 | 24.2 | -27.7 | Paral |

CKC Laboratories, Inc Date: 8/16/2013 Time: 16:49:41 Electronic Warfare Associates, Inc WO#: 94594
Test Distance: 3 Meters Sequence#: 27



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**
 Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**
 Work Order #: **94594** Date: 8/16/2013
 Test Type: **Radiated Scan** Time: 13:33:01
 Equipment: **Access Point** Sequence#: 12
 Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
 Model: SKEY-SSRF
 S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------|-----------|------------------|--------------|
| T1 | AN00852 | Biconilog Antenna | CBL 6111C | 11/28/2012 | 11/28/2014 |
| T2 | ANP00880 | Cable | RG214U | 7/30/2012 | 7/30/2014 |
| T3 | ANP05300 | Cable | RG214/U | 3/25/2013 | 3/25/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |
| T4 | AN00730 | Preamplifier | 8447D | 1/17/2013 | 1/17/2015 |
| T5 | ANP01183 | Cable | CNT-195 | 10/24/2011 | 10/24/2013 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

| |
|--|
| <p>Radiated Spurious Emission Frequency Range: 30MHz to 1000MHz Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110) Temperature: 22.1°C, Humidity: 43%, Atmospheric Pressure: 101.2 kPa High Clock: 26MHz</p> <p>Transmitting operating frequency= 923MHz and 2481MHz RF Output= 0dBm at the antenna feed point Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)</p> <p>9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz; 150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz; 30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz, 1000 MHz-25000MHz; RBW=1 MHz, VBW=1 MHz.</p> <p>The EUT is a fit device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive.</p> <p>Note: Channel 2481MHz</p> |
|--|

Ext Attn: 0 dB

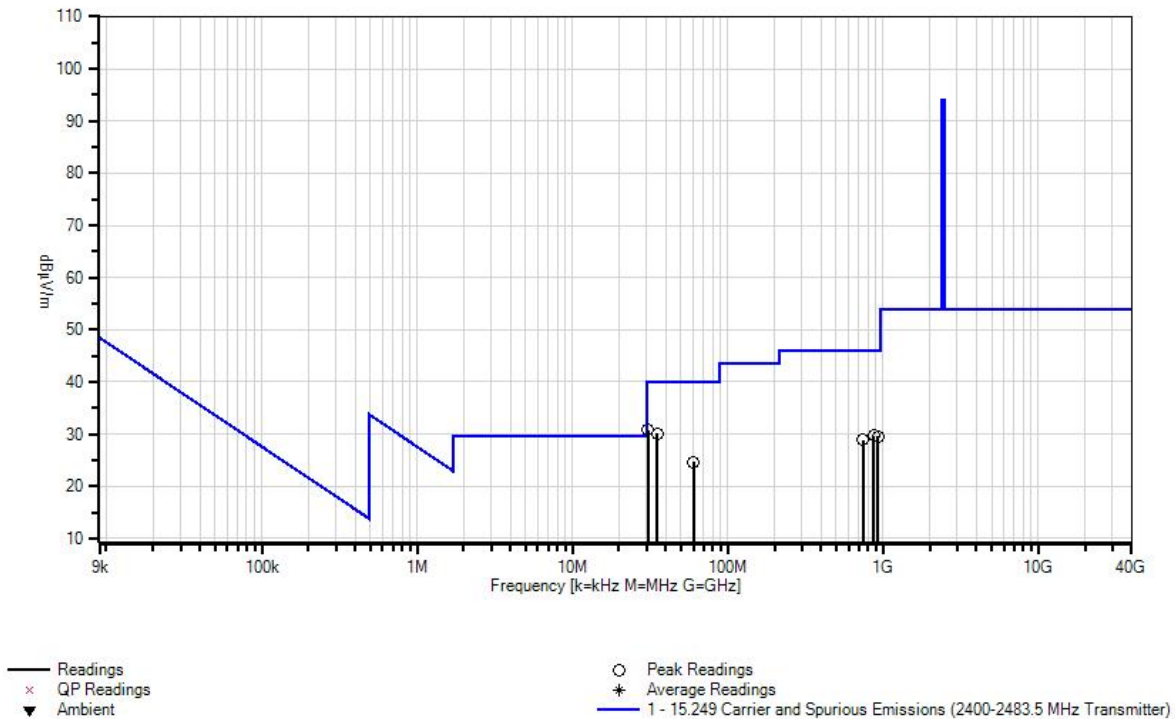
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

| # | Freq MHz | Rdng dB μ V | T1 T5 dB | T2 dB | T3 dB | T4 dB | Dist Table | Corr dB μ V/m | Spec dB μ V/m | Margin dB | Polar Ant |
|---|-------------|--------------------|----------------|----------|----------|----------|---------------|----------------------|----------------------|--------------|--------------|
| 1 | 30.599M | 39.0 | +18.1 +0.2 | +0.5 | +0.1 | -27.1 | +0.0 | 30.8 | 40.0 | -9.2 | Vert |
| 2 | 35.124M | 40.6 | +15.7 +0.2 | +0.5 | +0.1 | -27.0 | +0.0 | 30.1 | 40.0 | -9.9 | Vert |
| 3 | 60.014M | 44.9 | +5.8 +0.1 | +0.7 | +0.2 | -27.1 | +0.0 | 24.6 | 40.0 | -15.4 | Vert |
| 4 | 866.878M | 28.6 | +22.9 +0.9 | +3.4 | +0.9 | -27.0 | +0.0 | 29.7 | 46.0 | -16.3 | Horiz |
| 5 | 924.056M | 28.6 | +22.7 +0.9 | +3.5 | +0.9 | -27.1 | +0.0 | 29.5 | 46.0 | -16.5 | Horiz |
| 6 | 747.479M | 29.1 | +21.9 +0.9 | +3.0 | +0.8 | -26.9 | +0.0 | 28.8 | 46.0 | -17.2 | Horiz |

CKC Laboratories, Inc Date: 8/16/2013 Time: 13:33:01 Electronic Warfare Associates, Inc WO#: 94594
Test Distance: 3 Meters Sequence#: 12



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**
 Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**
 Work Order #: **94594** Date: 8/16/2013
 Test Type: **Radiated Scan** Time: 15:00:48
 Equipment: **Access Point** Sequence#: 18
 Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
 Model: **SKEY-SSRF**
 S/N: **ENG1**

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------------|--------------------------|------------------|--------------|
| T1 | AN03114 | Preamp | AMF-7D-00101800-30-10P | 4/11/2013 | 4/11/2015 |
| T2 | AN02157 | Horn Antenna-ANSI C63.5 | 3115 | 1/23/2013 | 1/23/2015 |
| T3 | AN03015 | Cable | 32022-2-29094K-24TC | 5/6/2013 | 5/6/2015 |
| T4 | AN03302 | Cable | 32026-29094K-29094K-72TC | 3/21/2012 | 3/21/2014 |
| T5 | ANP01210 | Cable | FSJ1P-50A-4A | 2/19/2013 | 2/19/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |
| T6 | AN03309 | High Pass Filter | 11SH10-3000/T10000-O/O | 6/12/2012 | 6/12/2014 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

Radiated Spurious Emission
 Frequency Range: 1000MHz to 12000MHz
 Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)
 Temperature: 22.1°C, Humidity: 43%, Atmospheric Pressure: 101.2 kPa
 High Clock: 26MHz
 Transmitting operating frequency= 923MHz and 2481MHz
 RF Output= 0dBm at the antenna feed point
 Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)

 9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz;
 150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz;
 30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz,
 1000 MHz-25000MHz; RBW=1 MHz, VBW=1 MHz.
 The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive.
 Note: Channel 2481MHz

Ext Attn: 0 dB

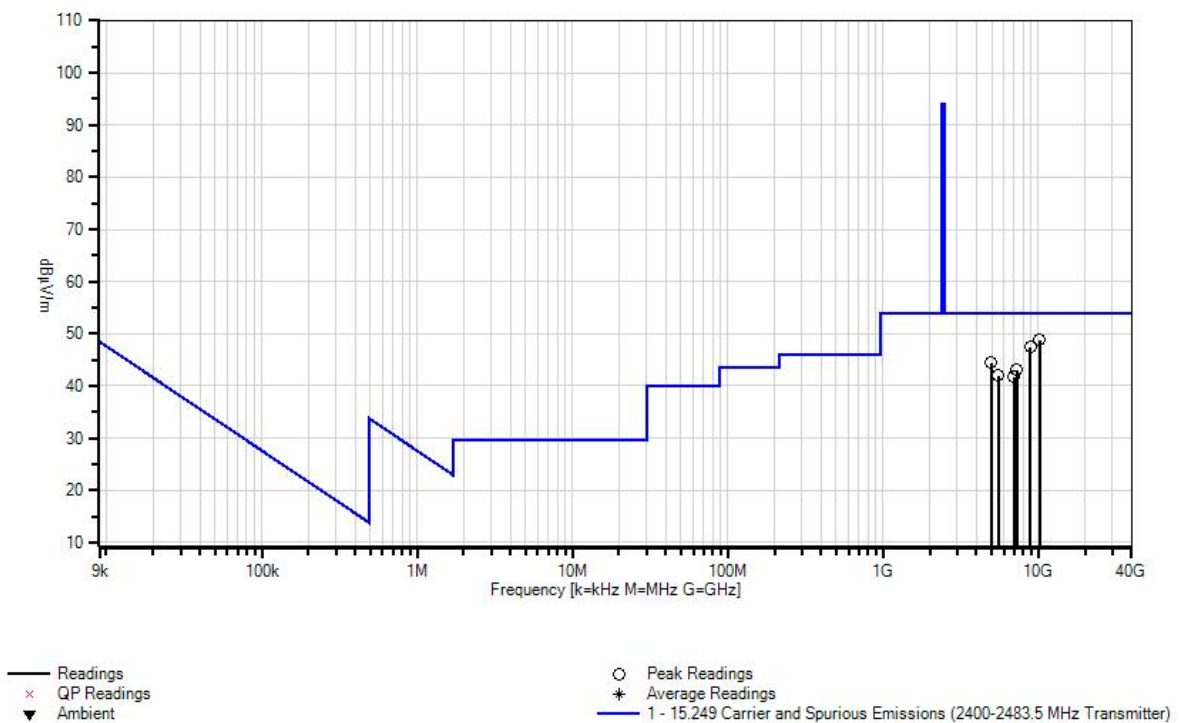
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

| # | Freq MHz | Rdng dB μ V | T1 T5 dB | T2 T6 dB | T3 dB | T4 dB | Dist Table | Corr dB μ V/m | Spec dB μ V/m | Margin dB | Polar Ant |
|---|----------------|--------------------|----------------|----------------|----------|----------|---------------|----------------------|----------------------|--------------|--------------|
| 1 | 10179.172 M | 57.3 | -58.2 +6.3 | +39.7 +0.1 | +1.3 | +2.3 | +0.0 | 48.8 | 54.0 | -5.2 | Horiz |
| 2 | 8868.863M | 55.8 | -56.3 +6.0 | +38.1 +0.3 | +1.4 | +2.1 | +0.0 | 47.4 | 54.0 | -6.6 | Vert |
| 3 | 4961.960M | 62.3 | -57.9 +3.9 | +33.6 +0.2 | +0.7 | +1.6 | +0.0 | 44.4 | 54.0 | -9.6 | Vert |
| 4 | 7238.234M | 57.8 | -59.3 +5.3 | +36.2 +0.2 | +1.0 | +1.9 | +0.0 | 43.1 | 54.0 | -10.9 | Horiz |
| 5 | 5535.533M | 57.7 | -56.8 +4.0 | +34.7 +0.2 | +0.6 | +1.6 | +0.0 | 42.0 | 54.0 | -12.0 | Vert |
| 6 | 6954.951M | 57.7 | -59.4 +5.1 | +35.3 +0.2 | +0.9 | +1.9 | +0.0 | 41.7 | 54.0 | -12.3 | Horiz |

CKC Laboratories, Inc Date: 8/16/2013 Time: 15:00:48 Electronic Warfare Associates, Inc WO#: 94594
Test Distance: 3 Meters Sequence#: 18



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**
 Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**
 Work Order #: **94594** Date: 8/16/2013
 Test Type: **Radiated Scan** Time: 15:49:11
 Equipment: **Access Point** Sequence#: 21
 Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
 Model: SKEY-SSRF
 S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|------------------------|---------------------|---------------------------|------------------|--------------|
| T1 | ANANT-AN02693-20130221 | Active Horn Antenna | AMFW-5F-18002650-20-10P | 2/21/2013 | 2/21/2015 |
| T2 | ANP00928 | Cable | various | 2/10/2012 | 2/10/2014 |
| T3 | ANP06125 | Cable | 32022-29094K-29094K-72TC | 5/6/2013 | 5/6/2015 |
| T4 | ANP06126 | Cable | 32022-29094K-29094K-168TC | 9/7/2011 | 9/7/2013 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

Radiated Spurious Emission
 Frequency Range: 12000MHz to 18000MHz
 Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)
 Temperature: 22.1°C
 Humidity: 43%
 Atmospheric Pressure: 101.2 kPa
 High Clock: 26MHz

Transmitting operating frequency= 923MHz and 2481MHz
 RF Output= 0dBm at the antenna feed point
 Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)

9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz;
 150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz;
 30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz,
 1000 MHz-25000MHz; RBW=1 MHz, VBW=1 MHz.

The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive.
 Note: Channel 2481MHz

Ext Attn: 0 dB

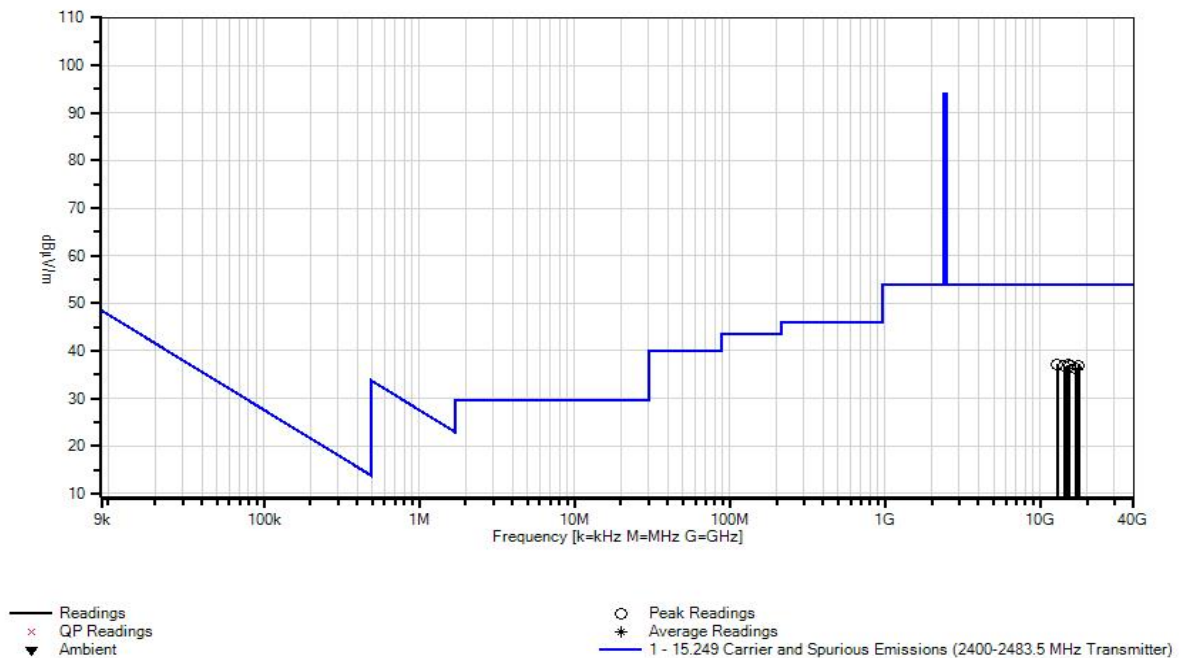
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

| # | Freq MHz | Rdng dB μ V | T1 dB | T2 dB | T3 dB | T4 dB | Dist Table | Corr dB μ V/m | Spec dB μ V/m | Margin dB | Polar Ant |
|---|----------------|--------------------|----------|----------|----------|----------|---------------|----------------------|----------------------|--------------|--------------|
| 1 | 12841.841 M | 45.6 | -15.9 | +0.9 | +2.6 | +4.0 | +0.0 | 37.2 | 54.0 | -16.8 | Horiz |
| 2 | 15027.024 M | 44.1 | -15.4 | +1.0 | +3.0 | +4.3 | +0.0 | 37.0 | 54.0 | -17.0 | Horiz |
| 3 | 17667.670 M | 42.0 | -13.8 | +0.8 | +3.2 | +4.7 | +0.0 | 36.9 | 54.0 | -17.1 | Vert |
| 4 | 14340.338 M | 44.4 | -15.6 | +0.9 | +2.8 | +4.3 | +0.0 | 36.8 | 54.0 | -17.2 | Vert |
| 5 | 15388.385 M | 44.1 | -15.8 | +1.0 | +3.1 | +4.4 | +0.0 | 36.8 | 54.0 | -17.2 | Vert |
| 6 | 16967.963 M | 43.4 | -15.5 | +0.9 | +3.0 | +4.6 | +0.0 | 36.4 | 54.0 | -17.6 | Horiz |

CKC Laboratories, Inc Date: 8/16/2013 Time: 15:49:11 Electronic Warfare Associates, Inc WO#: 94594
Test Distance: 3 Meters Sequence#: 21



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**
 Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**
 Work Order #: **94594** Date: 8/16/2013
 Test Type: **Radiated Scan** Time: 16:22:56
 Equipment: **Access Point** Sequence#: 24
 Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
 Model: SKEY-SSRF
 S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|--|---------------------------|------------------|--------------|
| T1 | ANP06125 | Cable | 32022-29094K-29094K-72TC | 5/6/2013 | 5/6/2015 |
| T2 | ANP06126 | Cable | 32022-29094K-29094K-168TC | 9/7/2011 | 9/7/2013 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |
| T3 | AN02694 | Horn Antenna-1 Meter Antenna Factors (dB) - SAE ARP 958 | AMFW-5F-18002650-20-10P | 2/4/2013 | 2/4/2015 |
| T4 | ANP00929 | Cable | various | 2/16/2012 | 2/16/2014 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

Support Devices:

| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

Radiated Spurious Emission
 Frequency Range: 18000MHz 25000

Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)
 Temperature: 22.1°C, Humidity: 43%, Atmospheric Pressure: 101.2 kPa
 High Clock: 26MHz

Transmitting operating frequency= 923MHz and 2481MHz
 RF Output= 0dBm at the antenna feed point
 Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)

9 kHz -150 kHz; RBW=200 Hz, VBW=200 Hz;
 150 kHz-30 MHz; RBW=9 kHz, VBW=9 kHz;
 30 MHz-1000 MHz; RBW=120 kHz, VBW=120 kHz,
 1000 MHz-25000MHz; RBW=1 MHz, VBW=1 MHz.

The EUT is a fixed device. It is placed on the 80 cm Styrofoam table. The EUT is set in continuously transmit or receive.
 Note: Channel 2481MHz

Ext Attn: 0 dB

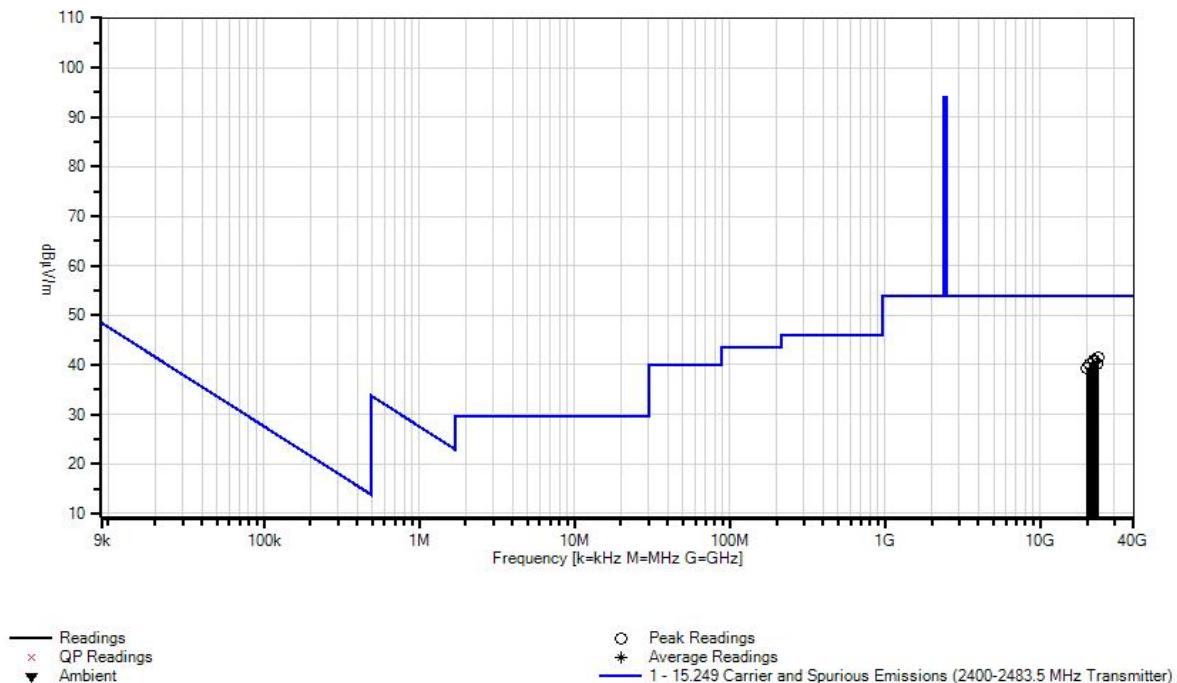
Measurement Data:

Reading listed by margin.

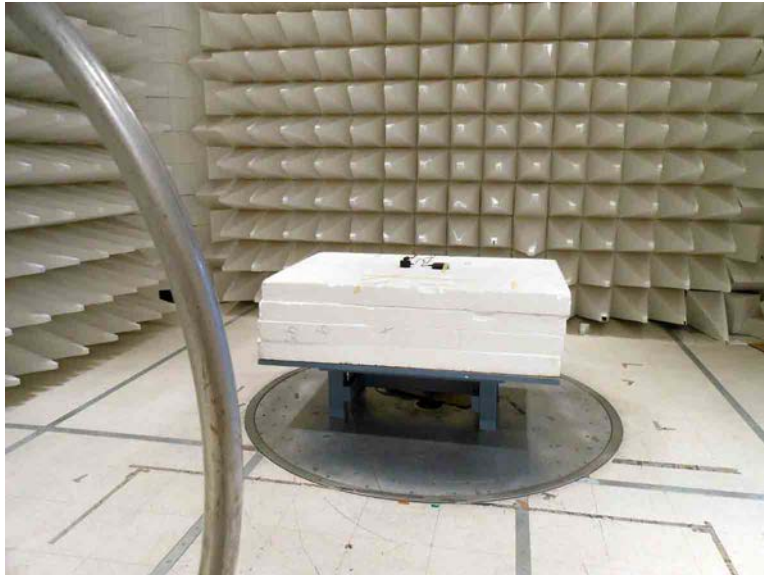
Test Distance: 3 Meters

| # | Freq MHz | Rdng dB μ V | T1 dB | T2 dB | T3 dB | T4 dB | Dist Table | Corr dB μ V/m | Spec dB μ V/m | Margin dB | Polar Ant |
|---|----------------|--------------------|----------|----------|----------|----------|---------------|----------------------|----------------------|--------------|--------------|
| 1 | 23537.441 M | 45.8 | +4.4 | +5.4 | -17.1 | +3.0 | +0.0 | 41.5 | 54.0 | -12.5 | Horiz |
| 2 | 22186.415 M | 45.3 | +4.4 | +5.3 | -17.0 | +2.9 | +0.0 | 40.9 | 54.0 | -13.1 | Horiz |
| 3 | 22130.129 M | 44.9 | +4.4 | +5.3 | -16.9 | +2.9 | +0.0 | 40.6 | 54.0 | -13.4 | Vert |
| 4 | 23151.105 M | 44.7 | +4.3 | +5.4 | -17.2 | +2.9 | +0.0 | 40.1 | 54.0 | -13.9 | Vert |
| 5 | 20830.193 M | 44.0 | +4.2 | +5.1 | -16.4 | +3.1 | +0.0 | 40.0 | 54.0 | -14.0 | Vert |
| 6 | 19957.128 M | 43.7 | +3.8 | +5.0 | -16.3 | +3.2 | +0.0 | 39.4 | 54.0 | -14.6 | Horiz |

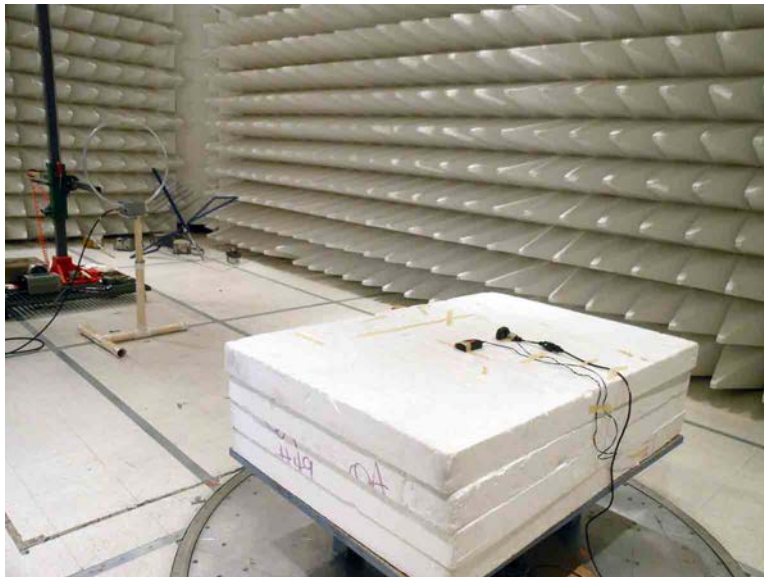
CKC Laboratories, Inc Date: 8/16/2013 Time: 16:22:56 Electronic Warfare Associates, Inc WO#: 94594
Test Distance: 3 Meters Sequence#: 24



Test Setup Photos



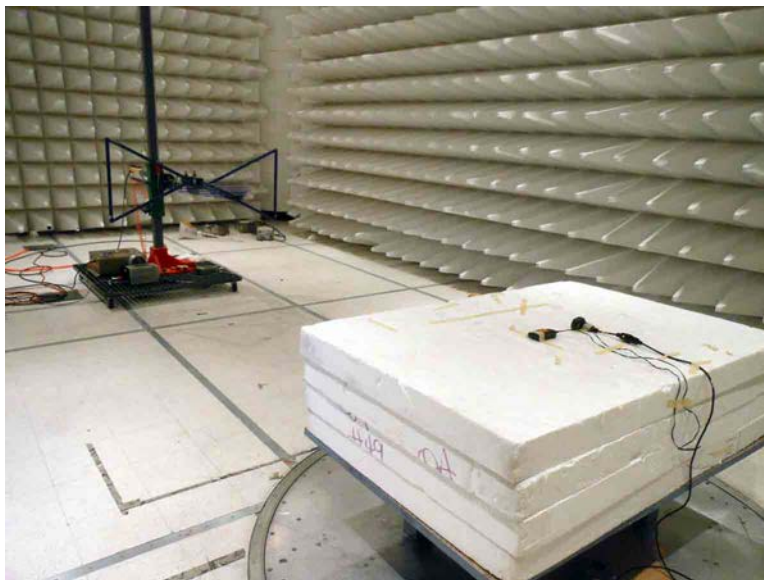
9kHz - 30MHz



9kHz - 30MHz



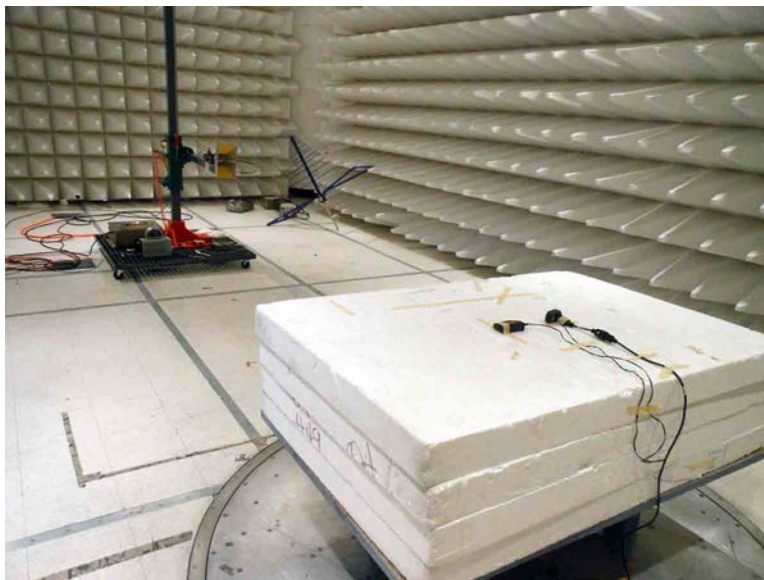
30MHz - 1GHz



30MHz - 1GHz



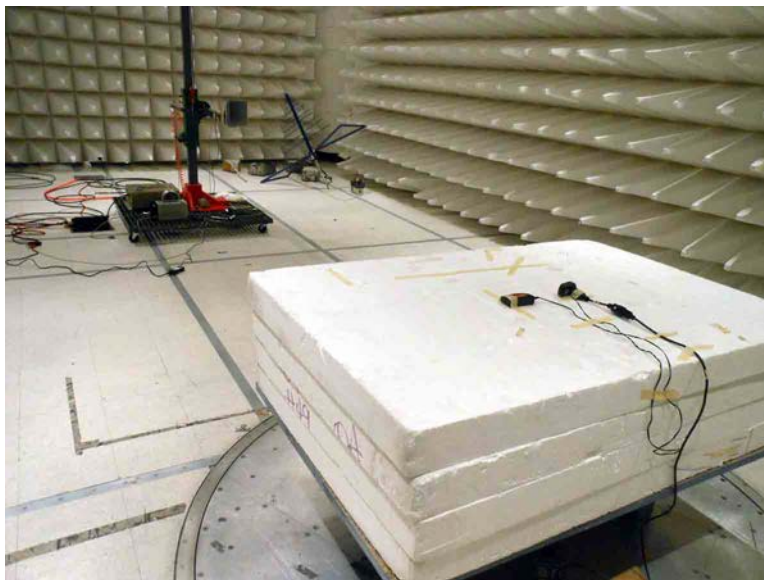
1-12GHz



1-12GHz



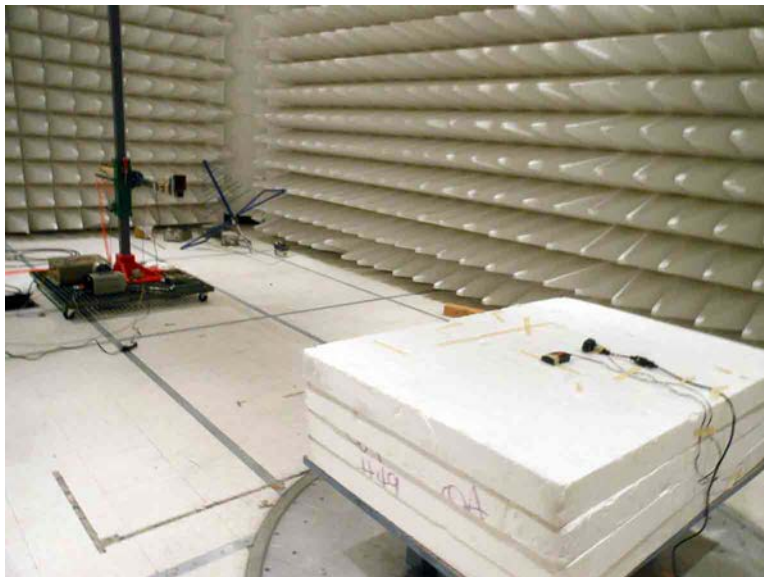
12-18GHz



12-18GHz



18-25GHz



18-25GHz

15.249(d) Band Edge

Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Electronic Warfare Associates, Inc.**

Specification: **Band Edge Set up**

Work Order #: **94594**

Date: 8/16/2013

Test Type: **Radiated Scan**

Time: 10:21:59

Equipment: **Access Point**

Sequence#: 5

Manufacturer: Electronic Warfare Associates, Inc.

Tested By: Hieu Song Nguyenpham

Model: SKEY-SSRF

S/N: ENG1

Test Equipment:

| ID | Asset # | Description | Model | Calibration Date | Cal Due Date |
|----|----------|-------------------------|--------------------------|------------------|--------------|
| T1 | AN00852 | Biconilog Antenna | CBL 6111C | 11/28/2012 | 11/28/2014 |
| T2 | ANP00880 | Cable | RG214U | 7/30/2012 | 7/30/2014 |
| T3 | ANP05300 | Cable | RG214/U | 3/25/2013 | 3/25/2015 |
| T4 | AN02157 | Horn Antenna-ANSI C63.5 | 3115 | 1/23/2013 | 1/23/2015 |
| T5 | AN03302 | Cable | 32026-29094K-29094K-72TC | 3/21/2012 | 3/21/2014 |
| T6 | ANP01210 | Cable | FSJ1P-50A-4A | 2/19/2013 | 2/19/2015 |
| | AN02668 | Spectrum Analyzer | E4446A | 2/22/2013 | 2/22/2015 |

Equipment Under Test (* = EUT):

| Function | Manufacturer | Model # | S/N |
|---------------------|-------------------------------------|-------------|---------|
| AC/DC Power adapter | Triad | WSU075-1000 | E345519 |
| Access Point* | Electronic Warfare Associates, Inc. | SKEY-SSRF | ENG1 |

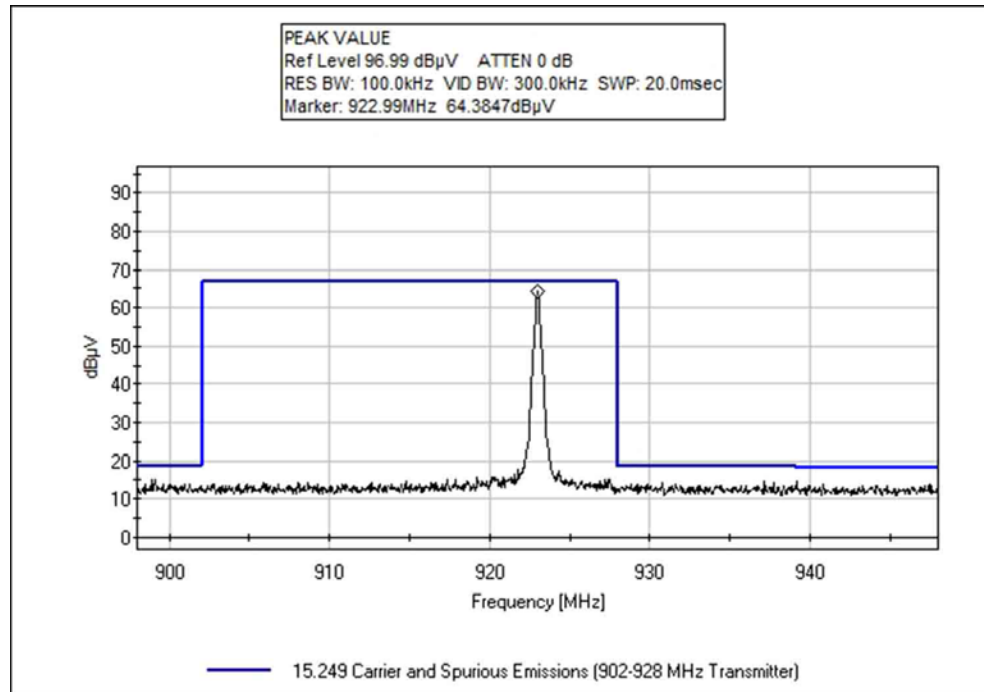
Support Devices:

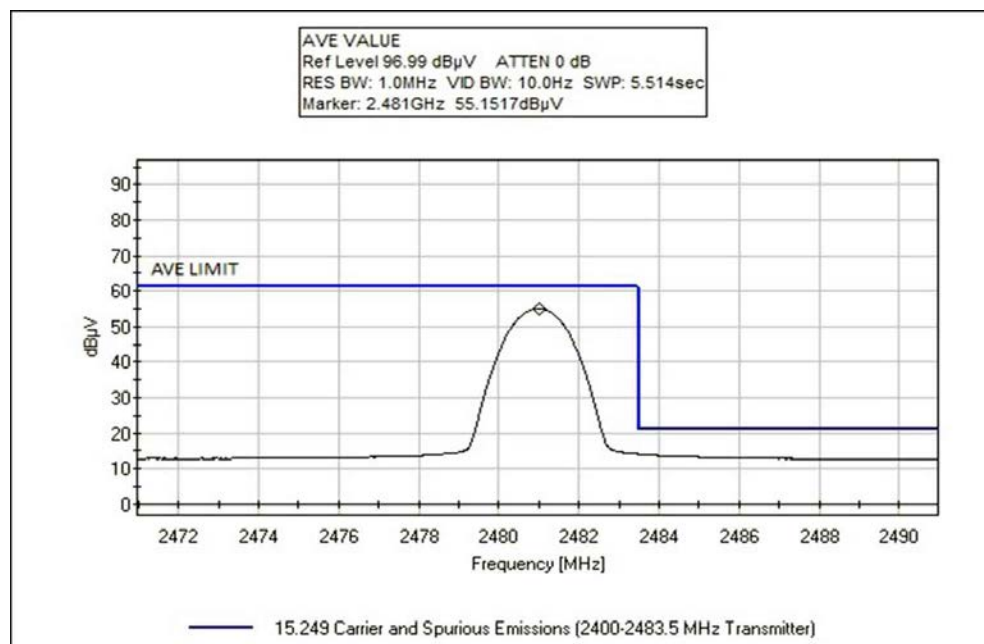
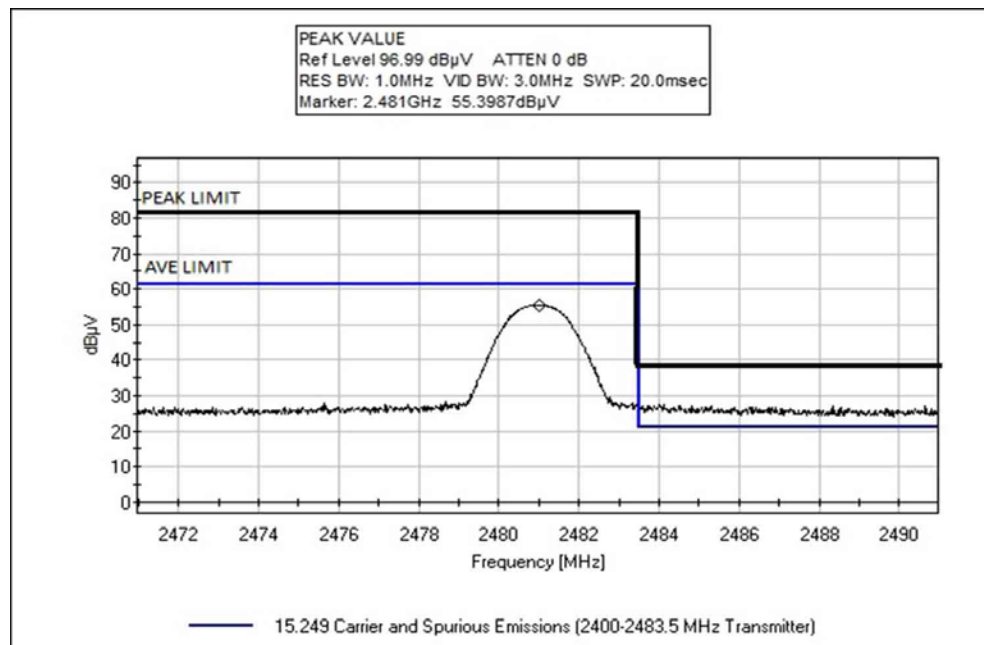
| Function | Manufacturer | Model # | S/N |
|----------|--------------|---------|-----|
|----------|--------------|---------|-----|

Test Conditions / Notes:

Band edge Set up. Software Used: C and is permanently burned into memory as binary machine language (two different processors, CC2510 and CC1110)
 Temperature: 22.1°C, Humidity: 43%, Atmospheric Pressure: 101.2 kPa
 High Clock: 26MHz
 Transmitting operating frequency= 923MHz and 2481MHz
 RF Output= 0dBm at the antenna feed point
 Gain of the antenna= 0 dBi (923 MHz) and +1.5 dBi (2.481 GHz)
 The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continuously transmit or receive

Test Data

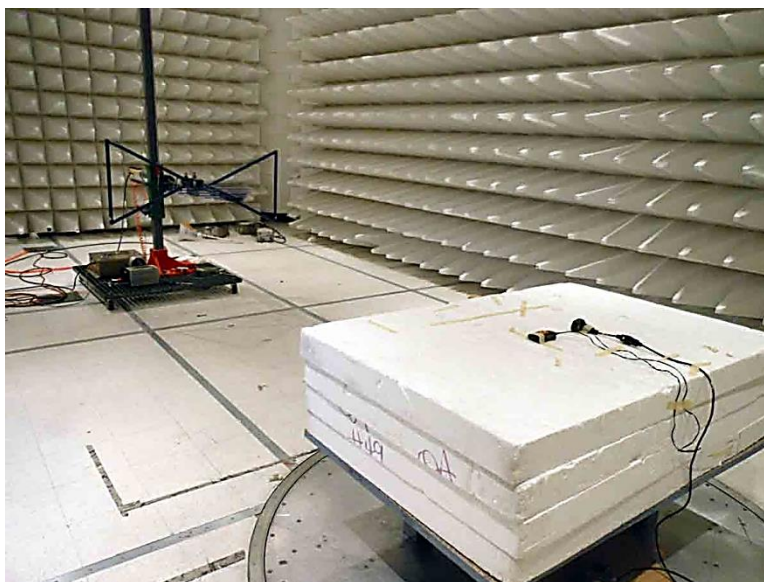




Test Setup Photos



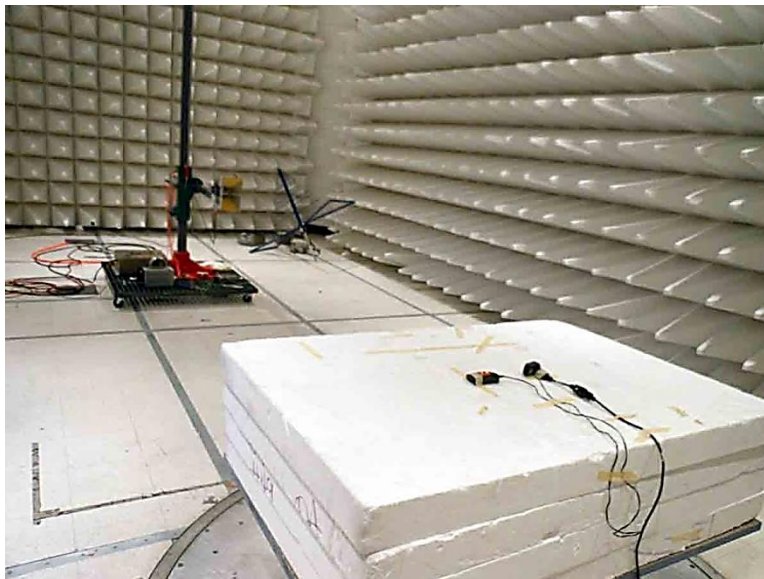
923MHz



923MHz



2481MHz



2481MHz

SUPPLEMENTAL INFORMATION

Measurement Uncertainty

| Uncertainty Value | Parameter |
|-------------------|---------------------------|
| 4.73 dB | Radiated Emissions |
| 3.34 dB | Mains Conducted Emissions |
| 3.30 dB | Disturbance Power |

The reported measurement uncertainties are calculated based on the worst case of all laboratory environments from CKC Laboratories, Inc. test sites. Only those parameters which require estimation of measurement uncertainty are reported. The reported worst case measurement uncertainty is less than the maximum values derived in CISPR 16-4-2. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k=2$. Compliance is deemed to occur provided measurements are below the specified limits.

Emissions Test Details

TESTING PARAMETERS

Unless otherwise indicated, the following configuration parameters are used for equipment setup: The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dB μ V/m, the spectrum analyzer reading in dB μ V was corrected by using the following formula. This reading was then compared to the applicable specification limit.

| SAMPLE CALCULATIONS | | |
|---------------------|---------------------|----------|
| | Meter reading | (dBμV) |
| + | Antenna Factor | (dB) |
| + | Cable Loss | (dB) |
| - | Distance Correction | (dB) |
| - | Preamplifier Gain | (dB) |
| = | Corrected Reading | (dBμV/m) |

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. Unless otherwise specified, the following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used.

| MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE | | | |
|--|---------------------|------------------|-------------------|
| TEST | BEGINNING FREQUENCY | ENDING FREQUENCY | BANDWIDTH SETTING |
| CONDUCTED EMISSIONS | 150 kHz | 30 MHz | 9 kHz |
| RADIATED EMISSIONS | 9 kHz | 150 kHz | 200 Hz |
| RADIATED EMISSIONS | 150 kHz | 30 MHz | 9 kHz |
| RADIATED EMISSIONS | 30 MHz | 1000 MHz | 120 kHz |
| RADIATED EMISSIONS | 1000 MHz | >1 GHz | 1 MHz |

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "positive peak" detector mode. Whenever a "quasi-peak" or "average" reading was recorded, the measurement was annotated with a "QP" or an "Ave" on the appropriate rows of the data sheets. In cases where quasi-peak or average limits were employed and data exists for multiple measurement types for the same frequency then the peak measurement was retained in the report for reference, however the numbering for the affected row was removed and an arrow or carrot ("^") was placed in the far left-hand column indicating that the row above takes precedence for comparison to the limit. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the spectrum analyzer or receiver recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature called "peak hold," the measurement device had the ability to measure intermittent or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

Quasi-peak measurements were taken using the quasi-peak detector when the true peak values exceeded or were within 2 dB of a quasi-peak specification limit. Additional QP measurements may have been taken at the discretion of the operator.

Average

Average measurements were taken using the average detector when the true peak values exceeded or were within 2 dB of an average specification limit. Additional average measurements may have been taken at the discretion of the operator. If the specification or test procedure requires trace averaging, then the averaging was performed using 100 samples or as required by the specification. All other average measurements are performed using video bandwidth averaging. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.