Electronic Warfare Associates, Inc.

TEST REPORT FOR

Access Point
Model: SKEY-KC

Tested To The Following Standards:

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

Report No.: 94579-11

Date of issue: August 19, 2013

ACCREDITED
Testing Certificates:
803.01, 803.02, 803.05, 803.06

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.

Testing the Future
CKC LABORATORIES, INC.

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ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

Electronic Warfare Associates, Inc.
13873 Park Center Rd.
Herndon, VA 20171

Representative: Jason Pizzillo
Customer Reference Number: P210000039

REPORT PREPARED BY:

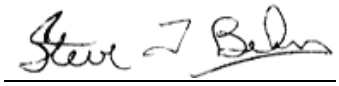
Dianne Dudley
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Project Number: 94579

DATE OF EQUIPMENT RECEIPT: July 22, 2013
DATE(S) OF TESTING: July 22 - August 9, 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.



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
Voltage Variation	FCC Part 15 Subpart C Section 15.31(e) / ANSI C63.4 (2003)	Pass
Conducted Emissions	FCC Part 15 Subpart C Section 15.207 / ANSI C63.4 (2003)	Pass
RF Power Output	FCC Part 15 Subpart C Section 15.249(a)(b) / ANSI C63.4 (2003)	Pass
-20dBc Occupied Bandwidth	FCC Part 15 Subpart C Section 15.249/ 2.1049 / ANSI C63.4 (2003)	Pass
Field Strength of Harmonics and Spurious Emissions / Bandedge	FCC Part 15 Subpart C Section 15.249(a)(d) / ANSI C63.4 (2003)	Pass
99 % Bandwidth	RSS 210 Issue 8	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
The customer changed the routing of the differential traces in the Ethernet section of the EUT during spurious emissions testing.

EQUIPMENT UNDER TEST (EUT)

EQUIPMENT UNDER TEST

Access Point
Manuf: Electronic Warfare Associates, Inc.
Model: SKEY-KC
Serial: ENG1 / ENG2

AC/DC Power Adapter
Manuf: TRIAD
Model: WSU075-1000
Serial: E345519

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.

15.31(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 #: **94579** Date: 7/27/2013
Test Type: **Radiated Scan** Time: 10:16:39
Equipment: **Access Point** Sequence#: 11
Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
Model: SKEY-KC
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
Access Point*	Electronic Warfare Associates, Inc.	SKEY-KC	ENG1
AC/DC Power Adapter	TRIAD	WSU075-1000	E345519

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

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

Temperature: 23.3°C
Humidity: 39 %
Atmospheric Pressure: 101.1 kPa
High Clock: 26MHz

transmit operating frequency= 923MHz
RF Output= 0dBm
Gain of the antenna= +1 dBi

The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continue transmit. RJ 45 cable is looped back to active RJ 45 port.

15.31e: Adjust the power voltage +/- 15% (102V and 138V), the RF output power is not changing.

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 #: **94579** Date: 7/25/2013
Test Type: **Conducted Emissions** Time: 16:50:47
Equipment: **Access Point** Sequence#: 7
Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
Model: SKEY-KC 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
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T4	ANP05258	High Pass Filter	HE9615-150K-50-720B	12/6/2012	12/6/2014
T5	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

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Access Point*	Electronic Warfare Associates, Inc.	SKEY-KC	ENG1
AC/DC Power Adapter	TRIAD	WSU075-1000	E345519

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, PIC and CC1110)

Temperature: 23.3°C
Humidity: 39 %
Atmospheric Pressure: 101.1 kPa
High Clock: 26MHz

Transmitting operating frequency= 923MHz
RF Output= 0dBm
Gain of the antenna= +1 dBi

The EUT is a fixed device. It is placed on the 80cm Styrofoam table and set continuously transmitting. The EUT is set in continue transmit. RJ 45 cable is looped back to active RJ 45 port.

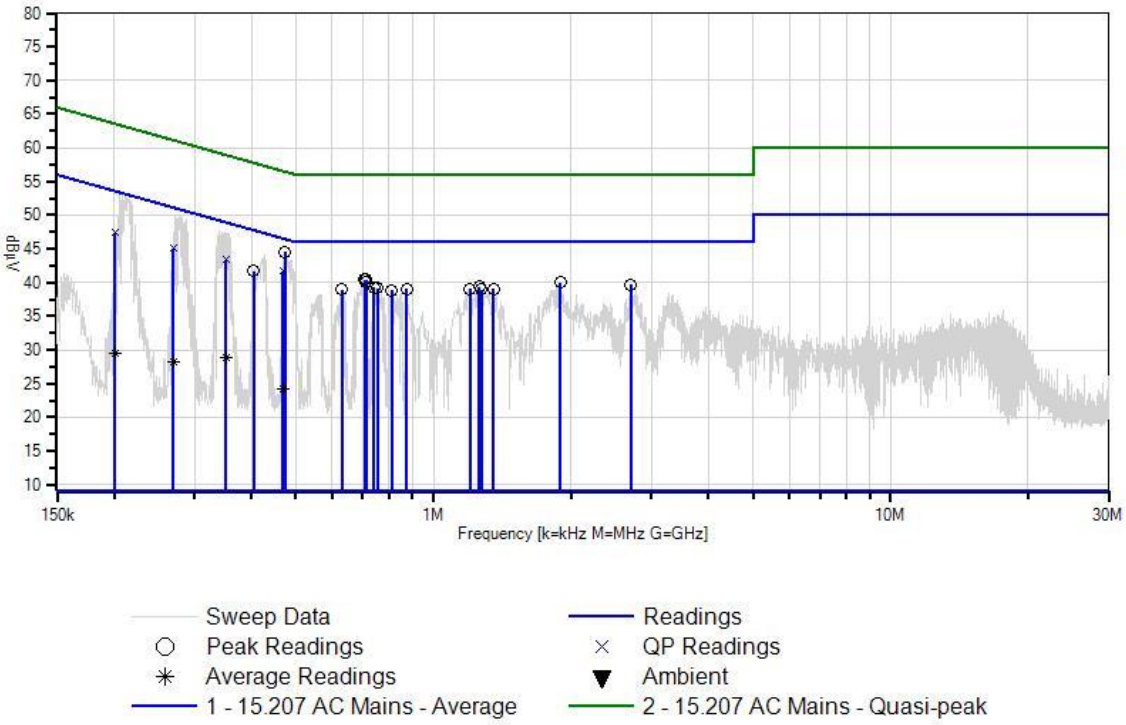
Ext Attn: 0 dB

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	473.607k	34.6	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	44.5	46.5	-2.0	Black
2	711.403k	30.5	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	40.4	46.0	-5.6	Black
3	706.313k	30.5	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	40.4	46.0	-5.6	Black
4	708.494k	30.2	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	40.1	46.0	-5.9	Black
5	1.894M	30.1	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	40.0	46.0	-6.0	Black
6	403.795k	31.9	+9.6 +0.1	+0.1	+0.0	+0.0	+0.0	41.7	47.8	-6.1	Black
7	2.702M	29.8	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	39.7	46.0	-6.3	Black
8	1.260M	29.5	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	39.4	46.0	-6.6	Black
9	741.946k	29.5	+9.5 +0.1	+0.1	+0.0	+0.1	+0.0	39.3	46.0	-6.7	Black
10	754.308k	29.2	+9.6 +0.1	+0.1	+0.0	+0.2	+0.0	39.2	46.0	-6.8	Black
11	1.354M	29.2	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	39.1	46.0	-6.9	Black
12	874.297k	29.1	+9.6 +0.1	+0.1	+0.0	+0.2	+0.0	39.1	46.0	-6.9	Black
13	1.200M	29.2	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	39.1	46.0	-6.9	Black
14	631.410k	29.0	+9.7 +0.1	+0.1	+0.0	+0.1	+0.0	39.0	46.0	-7.0	Black

15	1.273M	29.1	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	39.0	46.0	-7.0	Black
16	810.303k	28.9	+9.6 +0.1	+0.1	+0.0	+0.2	+0.0	38.9	46.0	-7.1	Black
17	468.305k QP	31.8	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	41.7	56.5	-14.8	Black
18	351.189k QP	33.5	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	43.4	58.9	-15.5	Black
19	269.350k QP	35.0	+9.6 +0.1	+0.1	+0.0	+0.2	+0.0	45.0	61.1	-16.1	Black
20	201.000k QP	37.4	+9.6 +0.1	+0.1	+0.0	+0.2	+0.0	47.4	63.6	-16.2	Black
21	351.189k Ave	19.0	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	28.9	48.9	-20.0	Black
^	351.189k	37.7	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	47.6	48.9	-1.3	Black
^	351.189k	36.4	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	46.3	48.9	-2.6	Black
24	468.305k Ave	14.4	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	24.3	46.5	-22.2	Black
^	468.305k	35.2	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	45.1	46.5	-1.4	Black
26	269.350k Ave	18.3	+9.6 +0.1	+0.1	+0.0	+0.2	+0.0	28.3	51.1	-22.8	Black
^	269.350k	40.1	+9.6 +0.1	+0.1	+0.0	+0.2	+0.0	50.1	51.1	-1.0	Black
^	269.350k	37.6	+9.6 +0.1	+0.1	+0.0	+0.2	+0.0	47.6	51.1	-3.5	Black
29	201.000k Ave	19.6	+9.6 +0.1	+0.1	+0.0	+0.2	+0.0	29.6	53.6	-24.0	Black
^	201.000k	43.0	+9.6 +0.1	+0.1	+0.0	+0.2	+0.0	53.0	53.6	-0.6	Black
^	201.000k	40.2	+9.6 +0.1	+0.1	+0.0	+0.2	+0.0	50.2	53.6	-3.4	Black

CKC Laboratories, Inc Date: 7/25/2013 Time: 16:50:47 Electronic Warfare Associates, Inc WO#: 94579
Test Lead: Black 120V 60Hz Sequence#: 7



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 #: **94579** Date: 7/25/2013
Test Type: **Conducted Emissions** Time: 4:52:21 PM
Equipment: **Access Point** Sequence#: 8
Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
Model: SKEY-KC 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
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T4	ANP05258	High Pass Filter	HE9615-150K-50-720B	12/6/2012	12/6/2014
	AN00493	50uH LISN-L1 (L) Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
T5	AN00493	50uH LISN-L(2) N Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Access Point*	Electronic Warfare Associates, Inc.	SKEY-KC	ENG1
AC/DC Power Adapter	TRIAD	WSU075-1000	E345519

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, PIC and CC1110)

Temperature: 23.3°C
Humidity: 39 %
Atmospheric Pressure: 101.1 kPa
High Clock: 26MHz

Transmitting operating frequency= 923MHz
RF Output= 0dBm
Gain of the antenna= +1 dBi

The EUT is a fixed device. It is placed on the 80cm Styrofoam table and set continuously transmitting. The EUT is set in continue transmit. RJ 45 cable is looped back to active RJ 45 port.

Ext Attn: 0 dB

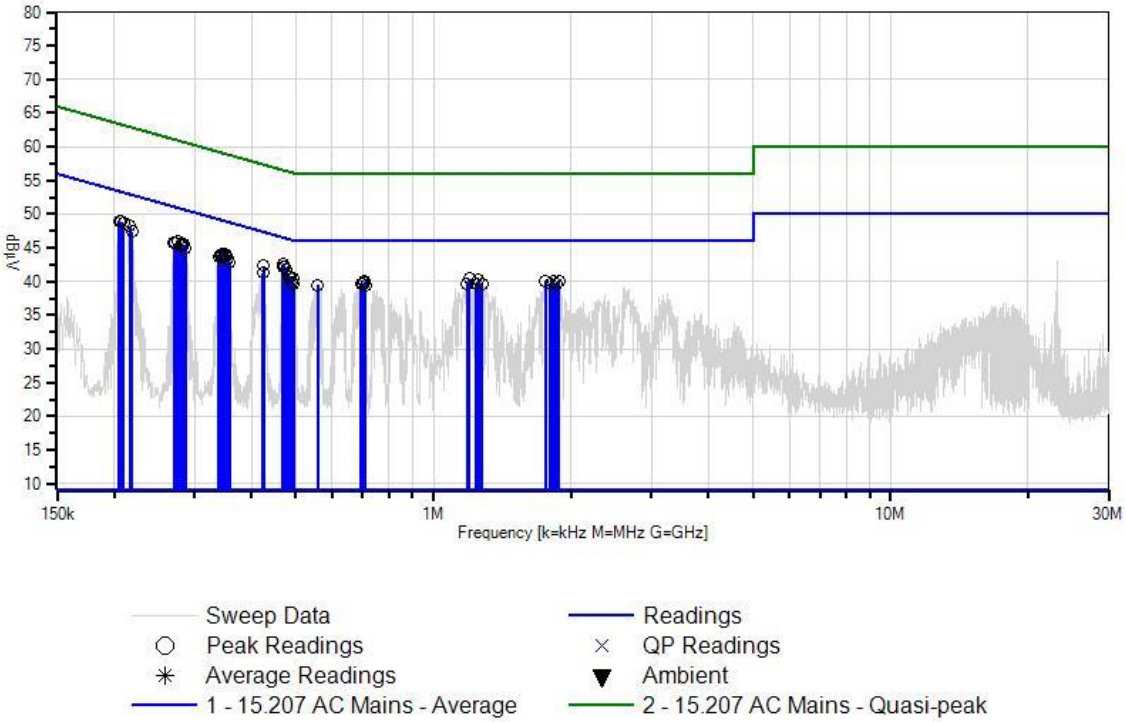
Measurement Data: Reading listed by margin. Test Lead: White

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	469.970k	32.2	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	42.6	46.5	-3.9	White
2	205.267k	38.5	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	49.0	53.4	-4.4	White
3	207.448k	38.4	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	48.9	53.3	-4.4	White
4	472.878k	31.7	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	42.1	46.5	-4.4	White
5	209.630k	38.2	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	48.7	53.2	-4.5	White
6	467.788k	31.7	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	42.1	46.6	-4.5	White
7	216.902k	37.7	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	48.2	52.9	-4.7	White
8	475.787k	31.3	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	41.7	46.4	-4.7	White
9	275.806k	35.5	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	46.0	50.9	-4.9	White
10	348.526k	33.6	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	44.0	49.0	-5.0	White
11	345.617k	33.7	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	44.1	49.1	-5.0	White
12	425.610k	32.0	+9.6 +0.6	+0.1	+0.0	+0.0	+0.0	42.3	47.3	-5.0	White
13	352.162k	33.5	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	43.9	48.9	-5.0	White
14	350.708k	33.4	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	43.8	48.9	-5.1	White
15	284.532k	35.0	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	45.5	50.7	-5.2	White
16	341.254k	33.5	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	43.9	49.2	-5.3	White
17	281.623k	35.0	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	45.5	50.8	-5.3	White
18	272.897k	35.2	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	45.7	51.0	-5.3	White
19	355.798k	33.1	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	43.5	48.8	-5.3	White
20	347.072k	33.3	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	43.7	49.0	-5.3	White
21	343.436k	33.4	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	43.8	49.1	-5.3	White

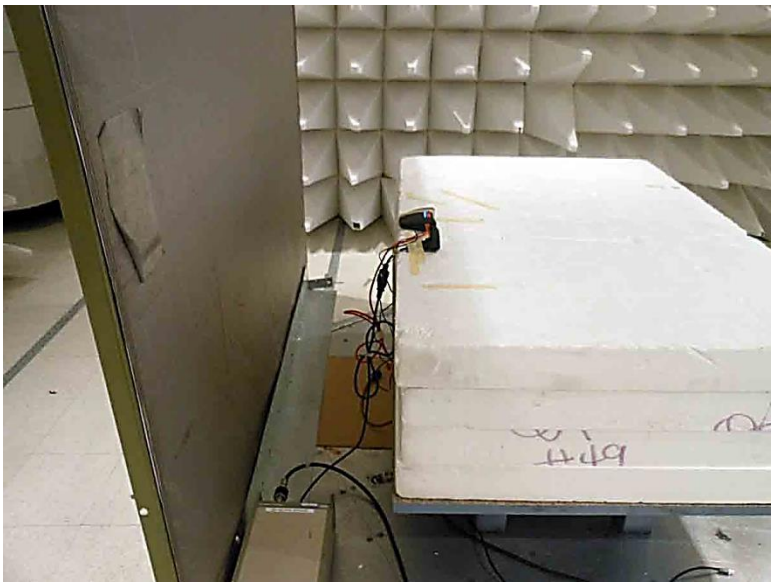
22	270.715k	35.2	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	45.7	51.1	-5.4	White
23	219.084k	36.9	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	47.4	52.9	-5.5	White
24	279.442k	34.8	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	45.3	50.8	-5.5	White
25	339.073k	33.3	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	43.7	49.2	-5.5	White
26	485.968k	30.2	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	40.6	46.2	-5.6	White
27	483.787k	30.3	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	40.7	46.3	-5.6	White
28	1.196M	30.0	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	40.4	46.0	-5.6	White
29	491.786k	30.1	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	40.5	46.1	-5.6	White
30	286.714k	34.4	+9.6 +0.6	+0.1	+0.0	+0.2	+0.0	44.9	50.6	-5.7	White
31	1.256M	29.8	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	40.2	46.0	-5.8	White
32	357.980k	32.5	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	42.9	48.8	-5.9	White
33	1.758M	29.7	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	40.1	46.0	-5.9	White
34	1.881M	29.7	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	40.1	46.0	-5.9	White
35	706.312k	29.6	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	40.0	46.0	-6.0	White
36	1.826M	29.6	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	40.0	46.0	-6.0	White
37	423.428k	31.0	+9.6 +0.6	+0.1	+0.0	+0.0	+0.0	41.3	47.4	-6.1	White
38	703.403k	29.4	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.8	46.0	-6.2	White
39	699.040k	29.3	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.7	46.0	-6.3	White
40	696.131k	29.3	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.7	46.0	-6.3	White
41	488.877k	29.5	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.9	46.2	-6.3	White
42	1.183M	29.3	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.7	46.0	-6.3	White
43	1.855M	29.3	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.7	46.0	-6.3	White
44	1.804M	29.3	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.7	46.0	-6.3	White
45	1.277M	29.3	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.7	46.0	-6.3	White
46	693.949k	29.2	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.6	46.0	-6.4	White
47	1.243M	29.2	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.6	46.0	-6.4	White

48	493.967k	29.2	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.6	46.1	-6.5	White
49	557.962k	29.1	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.5	46.0	-6.5	White
50	708.493k	29.1	+9.6 +0.6	+0.1	+0.0	+0.1	+0.0	39.5	46.0	-6.5	White

CKC Laboratories, Inc Date: 7/25/2013 Time: 4:52:21 PM Electronic Warfare Associates, Inc WO#: 94579
Test Lead: White 120V 60Hz Sequence#: 8



Test Setup Photos



15.249(a)(b) 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 #: **94579** Date: 7/27/2013
Test Type: **Radiated Scan** Time: 10:16:39
Equipment: **Access Point** Sequence#: 11
Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
Model: SKEY-KC
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
Access Point*	Electronic Warfare Associates, Inc.	SKEY-KC	ENG1
AC/DC Power Adapter	TRIAD	WSU075-1000	E345519

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, PIC and CC1110)

Temperature: 23.3°C
Humidity: 39 %
Atmospheric Pressure: 101.1 kPa
High Clock: 26MHz

transmit operating frequency= 923MHz
RF Output= 0dBm
Gain of the antenna= +1 dBi

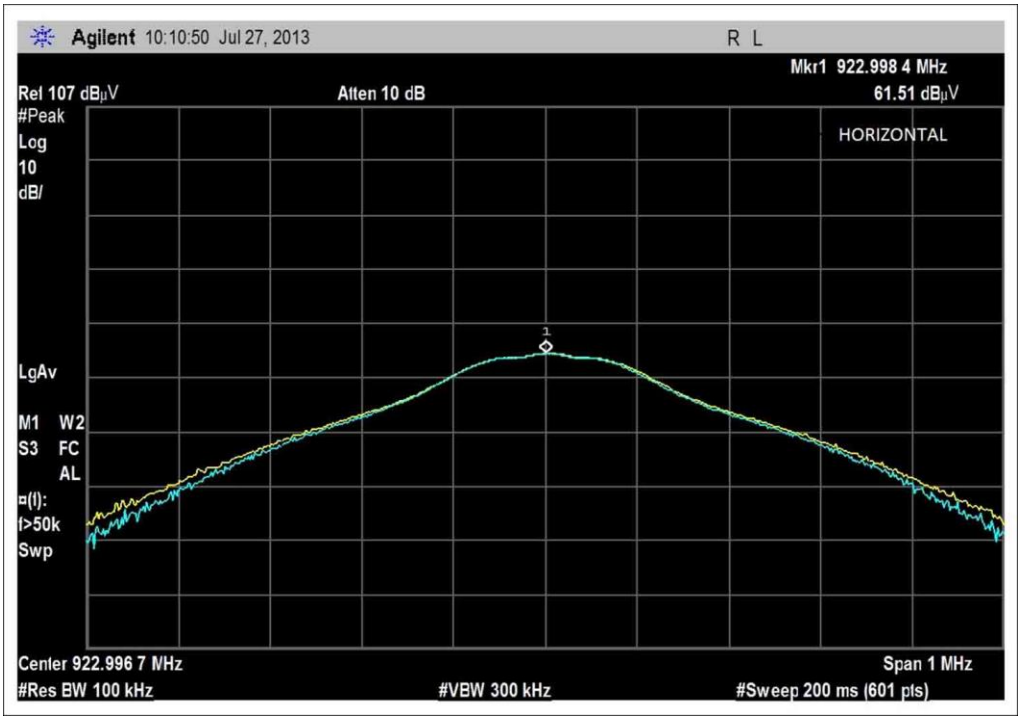
The EUT is a fixed device. It is placed on the 80cm Styrofoam table and set continuously transmitting. A RJ 45 cable is looped back to active RJ 45 port.

Test Data

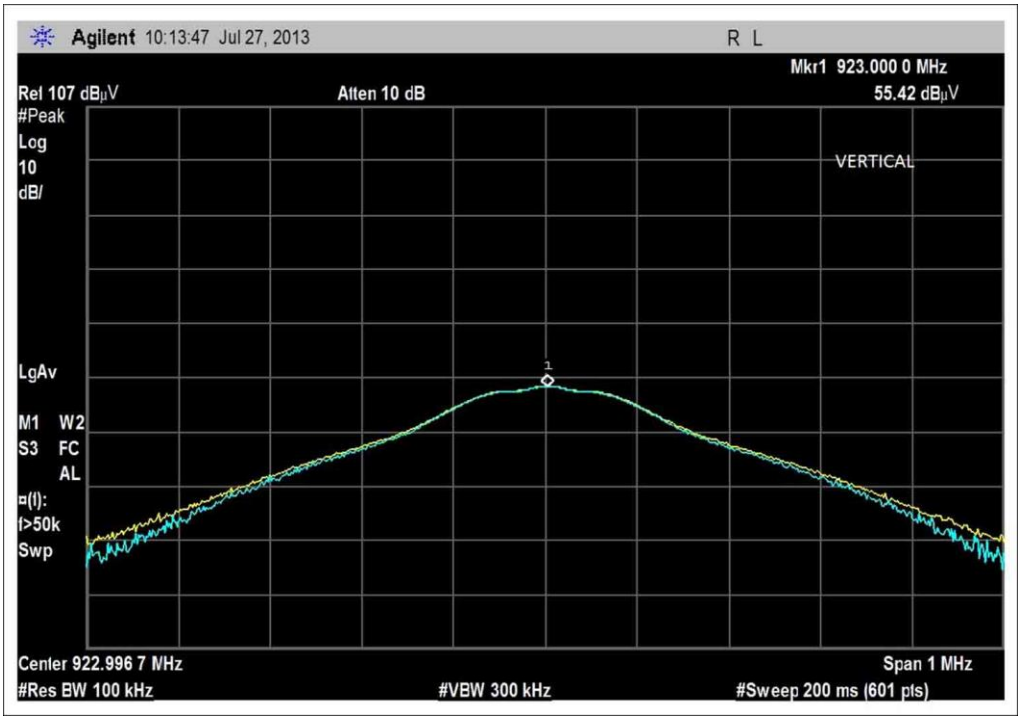
Ext Attn: 0 dB

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	923.000M	61.5	+22.7	+3.5	+0.9		+0.0	88.6	94.0	-5.4	Horiz
2	923.000M	55.4	+22.7	+3.5	+0.9		+0.0	82.5	94.0	-11.5	Vert

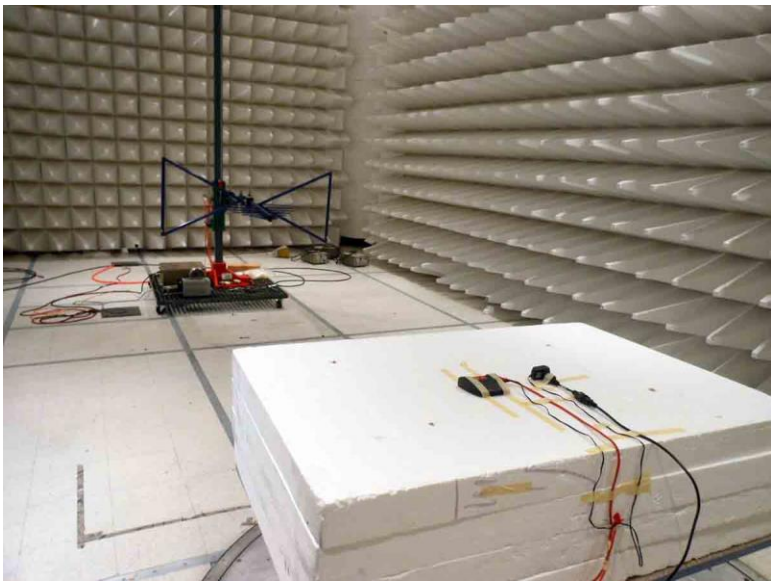


Horizontal


Agilent 10:13:47 Jul 27, 2013
R L
Mkr1 923.000 0 MHz
Ref 107 dBµV
Atten 10 dB
55.42 dBµV
#Peak
Log
10
dB/
VERTICAL
LgAv
M1 W2
S3 FC
AL
¤(f):
f>50k
Swp
Center 922.996 7 MHz
Span 1 MHz
#Res BW 100 kHz
#VBW 300 kHz
#Sweep 200 ms (601 pts)

Vertical

Test Setup Photos



-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**
Work Order #: **94579** Date: 7/27/2013
Test Type: **Radiated Scan** Time: 10:16:39
Equipment: **Access Point** Sequence#: 11
Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
Model: SKEY-KC
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
Access Point*	Electronic Warfare Associates, Inc.	SKEY-KC	ENG1
AC/DC Power Adapter	TRIAD	WSU075-1000	E345519

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

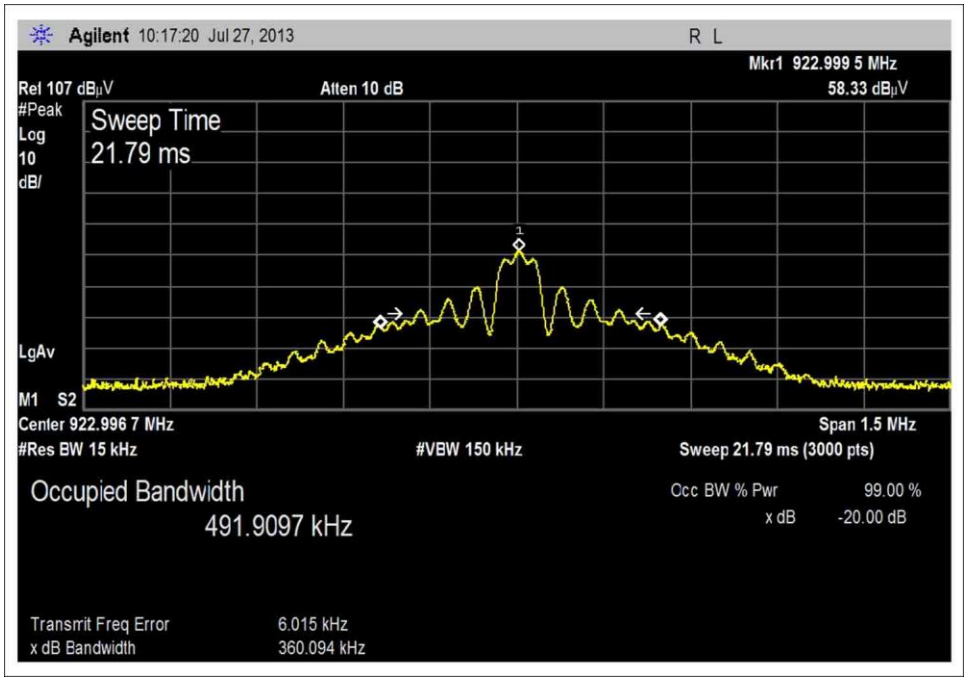
Software Used: C and is permanently burned into memory as binary machine language (two different processors, PIC and CC1110)

Temperature: 23.3°C
Humidity: 39 %
Atmospheric Pressure: 101.1 kPa
High Clock: 26MHz

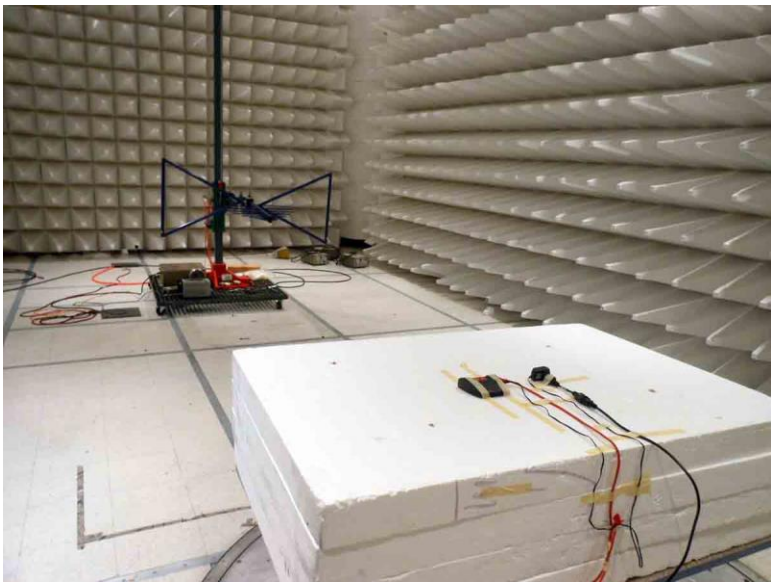
transmit operating frequency= 923MHz
RF Output= 0dBm
Gain of the antenna= +1 dBi

The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continue transmit. RJ 45 cable is looped back to active RJ 45 port.

Test Data


Agilent 10:17:20 Jul 27, 2013
R L
Mkr1 922.999 5 MHz
58.33 dBµV
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
Sweep Time
21.79 ms
LgAv
M1 S2
Center 922.996 7 MHz
Span 1.5 MHz
#Res BW 15 kHz
#VBW 150 kHz
Sweep 21.79 ms (3000 pts)
Occupied Bandwidth
491.9097 kHz
Occ BW % Pwr 99.00 %
x dB -20.00 dB
Transmit Freq Error 6.015 kHz
x dB Bandwidth 360.094 kHz

Test Setup Photos



15.249(a)(d) Field Strength of Harmonics and Spurious Emissions / Bandedge

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 #: **94579** Date: 8/9/2013
Test Type: **Radiated Scan** Time: 14:23:06
Equipment: **Access Point** Sequence#: 28
Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
Model: SKEY-KC
S/N: ENG2

***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
	AN02870	Spectrum Analyzer	E4440A	12/21/2011	12/21/2013

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	TRIAD	WSU075-1000	E345519
Access Point*	Electronic Warfare Associates, Inc.	SKEY-KC	ENG2

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, PIC and CC1110)

Temperature: 21.1°C
Humidity: 42 %
Atmospheric Pressure: 101.0 kPa
High Clock: 26MHz

transmit operating frequency= 923MHz
RF Output= 0dBm
Gain of the antenna= +1 dBi

9kHz -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 and at the center of a turning table. The EUT is set continuously transmit. A RJ 45 Cable is looped back to active RJ 45 port

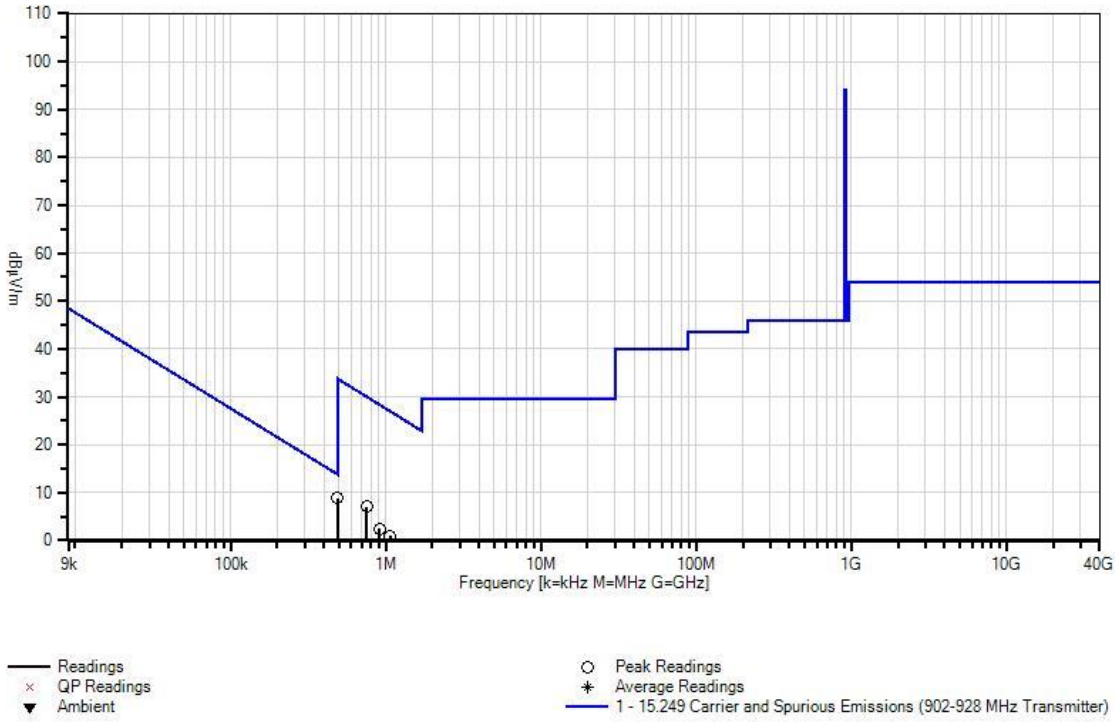
Note: The customer changed the routing of the differential traces in the Ethernet section of the EUT.

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	754.213k	37.3	+9.6	+0.1	+0.0		-40.0	7.0	30.0	-23.0	Perpe
2	490.784k	39.0	+9.8	+0.1	+0.0		-40.0	8.9	33.8	-24.9	Paral
3	915.197k	32.8	+9.5	+0.1	+0.0		-40.0	2.4	28.3	-25.9	Perpe
4	1.064M	31.2	+9.7	+0.1	+0.0		-40.0	1.0	27.0	-26.0	Paral
5	1.509M	27.0	+9.8	+0.1	+0.0		-40.0	-3.1	24.0	-27.1	Perpe
6	1.246M	28.0	+9.8	+0.1	+0.0		-40.0	-2.1	25.6	-27.7	Paral

CKC Laboratories, Inc Date: 8/9/2013 Time: 14:23:06 Electronic Warfare Associates, Inc WO#: 94579
Test Distance: 3 Meters Sequence#: 28



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 #: **94579** Date: 8/9/2013
Test Type: **Radiated Scan** Time: 09:43:44
Equipment: **Access Point** Sequence#: 16
Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
Model: SKEY-KC
S/N: ENG2

***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	AN00730	Preamp	8447D	1/17/2013	1/17/2015
T5	ANP01183	Cable	CNT-195	10/24/2011	10/24/2013
	AN02870	Spectrum Analyzer	E4440A	12/21/2011	12/21/2013

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	TRIAD	WSU075-1000	E345519
Access Point*	Electronic Warfare Associates, Inc.	SKEY-KC	ENG2

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

Radiated Spurious Emission
Frequency Range: 30MHz to 1000MHz

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

Temperature: 21.1°C
Humidity: 42 %
Atmospheric Pressure: 101.0 kPa
High Clock: 26MHz

transmit operating frequency= 923MHz
RF Output= 0dBm
Gain of the antenna= +1 dBi

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 and at the center of a turning table. The EUT is set continuously transmit. A RJ 45 Cable is looped back to active RJ 45 port.

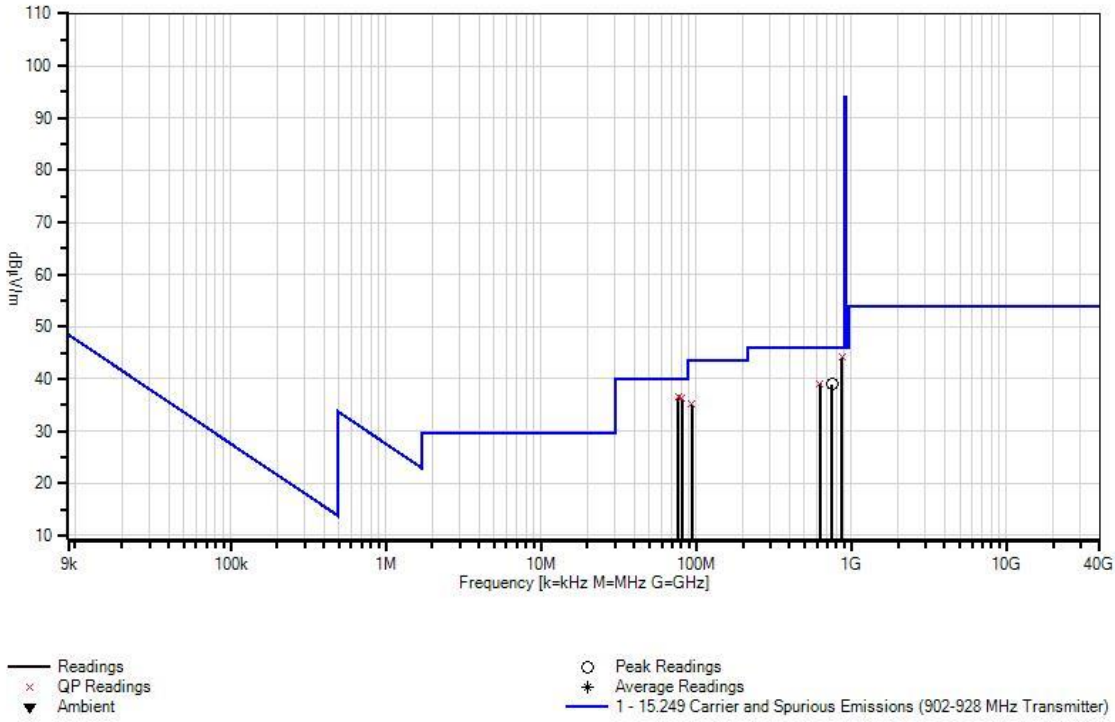
Note: The customer changed the routing of the differential traces in the Ethernet section of the EUT.

Ext Attn: 0 dB

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	874.940M	43.0	+22.9	+3.4	+0.9	-27.0	+0.0	44.1	46.0	-1.9	Horiz
	QP		+0.9								
^	874.940M	43.8	+22.9	+3.4	+0.9	-27.0	+0.0	44.9	46.0	-1.1	Horiz
			+0.9								
^	874.940M	42.1	+22.9	+3.4	+0.9	-27.0	+0.0	43.2	46.0	-2.8	Horiz
			+0.9								
4	77.192M	55.1	+7.3	+0.8	+0.2	-27.1	+0.0	36.5	40.0	-3.5	Vert
	QP		+0.2								
^	77.192M	56.9	+7.3	+0.8	+0.2	-27.1	+0.0	38.3	40.0	-1.7	Vert
			+0.2								
^	77.192M	56.3	+7.3	+0.8	+0.2	-27.1	+0.0	37.7	40.0	-2.3	Vert
			+0.2								
7	81.197M	54.2	+7.8	+0.8	+0.3	-27.0	+0.0	36.2	40.0	-3.8	Vert
	QP		+0.1								
^	81.197M	55.5	+7.8	+0.8	+0.3	-27.0	+0.0	37.5	40.0	-2.5	Vert
			+0.1								
^	81.197M	55.2	+7.8	+0.8	+0.3	-27.0	+0.0	37.2	40.0	-2.8	Vert
			+0.1								
10	624.957M	41.8	+20.0	+2.7	+0.7	-26.8	+0.0	39.1	46.0	-6.9	Horiz
	QP		+0.7								
^	624.957M	42.8	+20.0	+2.7	+0.7	-26.8	+0.0	40.1	46.0	-5.9	Horiz
			+0.7								
^	624.957M	42.4	+20.0	+2.7	+0.7	-26.8	+0.0	39.7	46.0	-6.3	Horiz
			+0.7								
13	750.002M	39.1	+22.1	+3.0	+0.8	-26.9	+0.0	39.0	46.0	-7.0	Horiz
			+0.9								
14	94.380M	51.5	+9.4	+0.9	+0.3	-27.1	+0.0	35.2	43.5	-8.3	Vert
	QP		+0.2								
^	94.380M	52.9	+9.4	+0.9	+0.3	-27.1	+0.0	36.6	43.5	-6.9	Vert
			+0.2								
^	94.380M	52.7	+9.4	+0.9	+0.3	-27.1	+0.0	36.4	43.5	-7.1	Vert
			+0.2								

CKC Laboratories, Inc Date: 8/9/2013 Time: 09:43:44 Electronic Warfare Associates, Inc WO#: 94579
Test Distance: 3 Meters Sequence#: 16



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 #: **94579** Date: 8/9/2013
Test Type: **Radiated Scan** Time: 13:45:53
Equipment: **Access Point** Sequence#: 25
Manufacturer: Electronic Warfare Associates, Inc. Tested By: Hieu Song Nguyenpham
Model: SKEY-KC
S/N: ENG2

***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
	AN02870	Spectrum Analyzer	E4440A	12/21/2011	12/21/2013
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-KC	ENG2

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, PIC and CC1110)

Temperature: 21.1°C
Humidity: 42 %
Atmospheric Pressure: 101.0 kPa
High Clock: 26MHz

transmit operating frequency= 923MHz
RF Output= 0dBm
Gain of the antenna= +1 dBi
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.

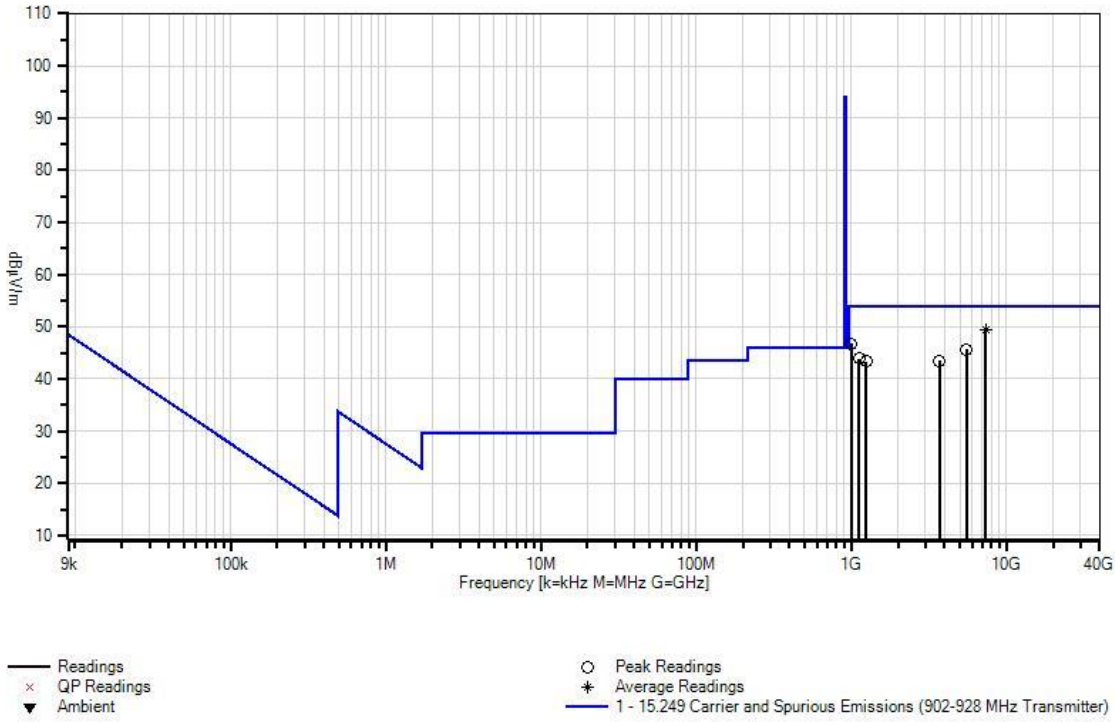
The EUT is a fixed device. It is placed on the 80cm Styrofoam table and at the center of a turning table. The EUT is set continuously transmit. A RJ 45 Cable is looped back to active RJ 45 port.
Note: The customer changed the routing of the differential traces in the Ethernet section of the EUT.

Ext Attn: 0 dB

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

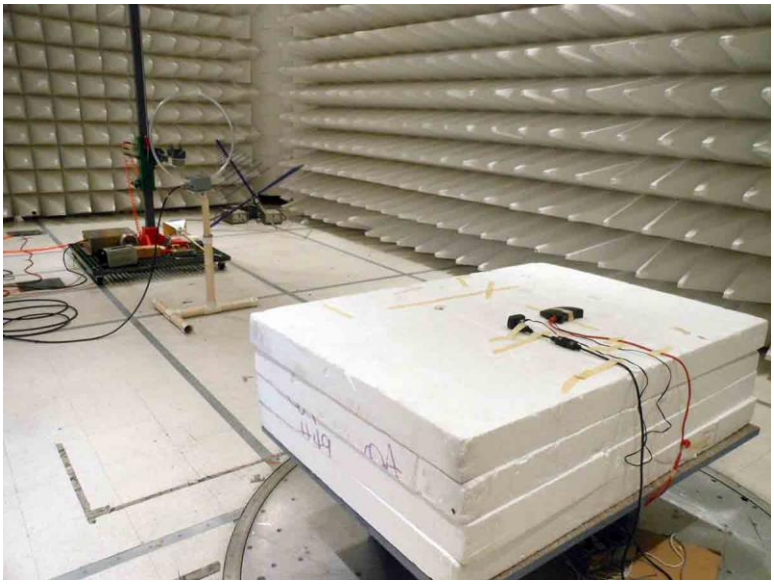
#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	7383.943M Ave	63.7	-59.4 +5.4	+36.8 +0.1	+1.0	+1.9	+0.0	49.5	54.0	-4.5	Vert
^	7383.943M	67.2	-59.4 +5.4	+36.8 +0.1	+1.0	+1.9	+0.0	53.0	54.0	-1.0	Vert
^	7383.943M	66.3	-59.4 +5.4	+36.8 +0.1	+1.0	+1.9	+0.0	52.1	54.0	-1.9	Vert
4	1002.002M	59.3	-59.1 +1.4	+23.9 +20.5	+0.1	+0.7	+0.0	46.8	54.0	-7.2	Vert
5	5537.533M	61.4	-56.8 +4.0	+34.7 +0.1	+0.6	+1.6	+0.0	45.6	54.0	-8.4	Vert
6	1125.125M	68.3	-59.2 +1.4	+24.8 +7.8	+0.1	+0.7	+0.0	43.9	54.0	-10.1	Horiz
7	3691.689M	65.7	-59.3 +3.2	+31.9 +0.2	+0.5	+1.3	+0.0	43.5	54.0	-10.5	Horiz
8	1250.250M	73.6	-59.3 +1.6	+25.3 +1.2	+0.1	+0.8	+0.0	43.3	54.0	-10.7	Horiz

CKC Laboratories, Inc Date: 8/9/2013 Time: 13:45:53 Electronic Warfare Associates, Inc WO#: 94579
Test Distance: 3 Meters Sequence#: 25

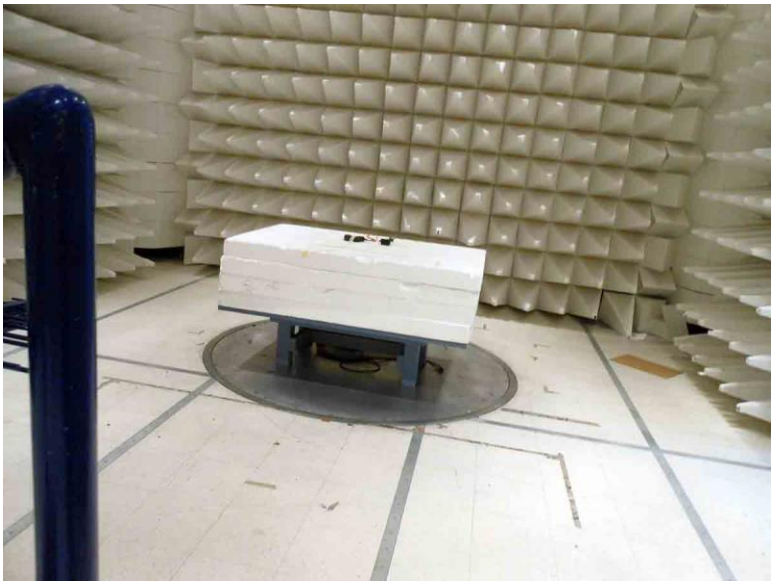


Test Setup Photos

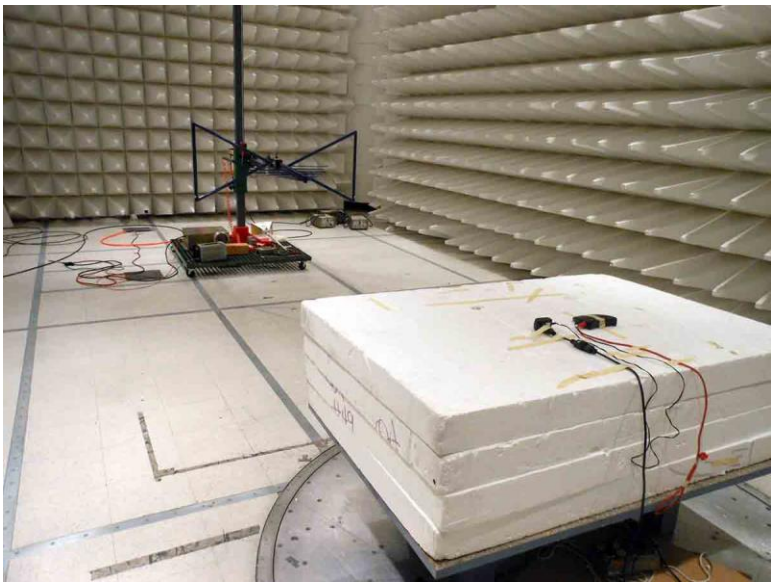
9kHz to 30MHz



9kHz to 30MHz

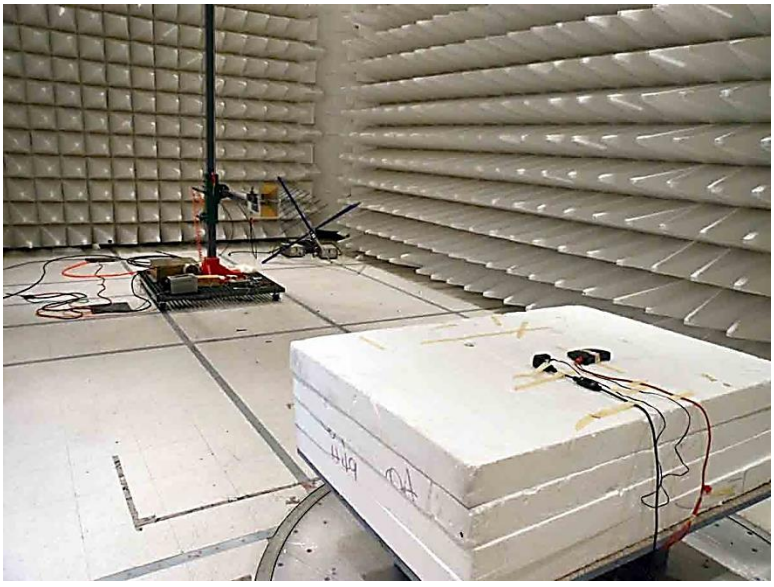


30MHz to 1GHz



30MHz to 1GHz

1GHz to 10GHz



1GHz to 10GHz

Bandedge

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**		
Work Order #:	**94579**	Date:	7/27/2013
Test Type:	**Radiated Scan**	Time:	10:16:39
Equipment:	**Access Point**	Sequence#:	11
Manufacturer:	Electronic Warfare Associates, Inc.	Tested By:	Hieu Song Nguyenpham
Model:	SKEY-KC		
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
Access Point*	Electronic Warfare Associates, Inc.	SKEY-KC	ENG1
AC/DC Power Adapter	TRIAD	WSU075-1000	E345519

Support Devices:

Function	Manufacturer	Model #	S/N

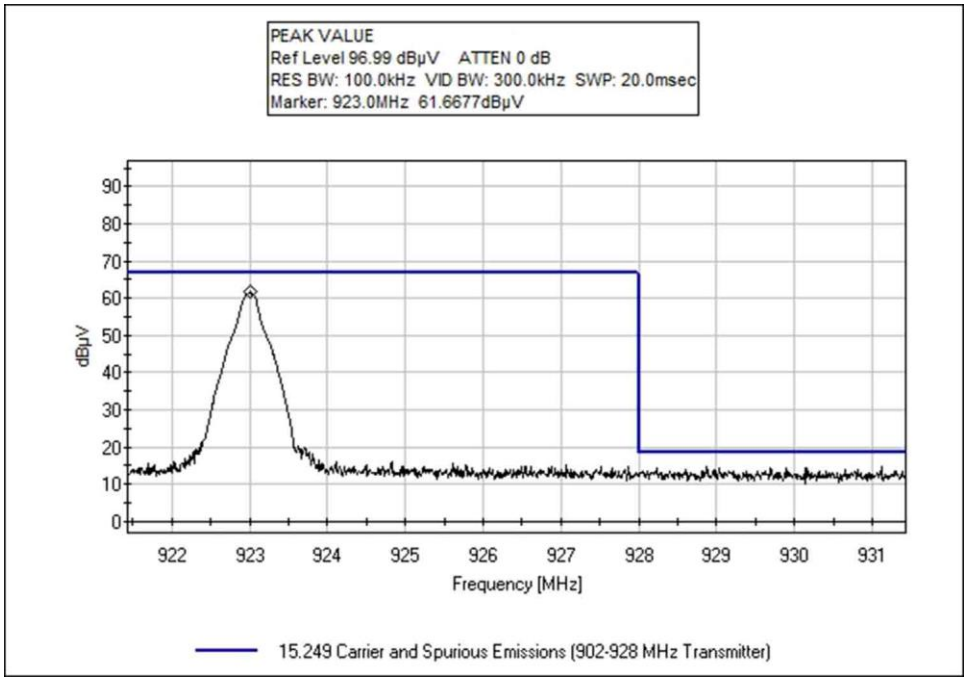
Test Conditions / Notes:

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

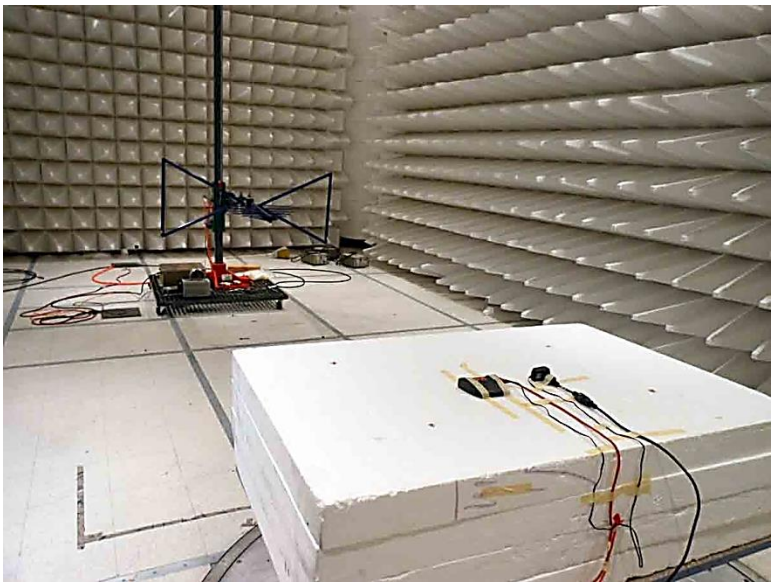
Temperature: 23.3°C
Humidity: 39 %
Atmospheric Pressure: 101.1 kPa
High Clock: 26MHz

transmit operating frequency= 923MHz
RF Output= 0dBm
Gain of the antenna= +1 dBi
The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continue transmit. RJ 45 cable is looped back to active RJ 45 port.

Test Data


PEAK VALUE
Ref Level 96.99 dBµV ATTEN 0 dB
RES BW: 100.0kHz VID BW: 300.0kHz SWP: 20.0msec
Marker: 923.0MHz 61.6677dBµV
dBµV
90
80
70
60
50
40
30
20
10
0
922
923
924
925
926
927
928
929
930
931
Frequency [MHz]
15.249 Carrier and Spurious Emissions (902-928 MHz Transmitter)

Test Setup Photos



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**		
Work Order #:	**94579**	Date:	7/27/2013
Test Type:	**Radiated Scan**	Time:	10:16:39
Equipment:	**Access Point**	Sequence#:	11
Manufacturer:	Electronic Warfare Associates, Inc.	Tested By:	Hieu Song Nguyenpham
Model:	SKEY-KC		
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
Access Point*	Electronic Warfare Associates, Inc.	SKEY-KC	ENG1
AC/DC Power Adapter	TRIAD	WSU075-1000	E345519

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

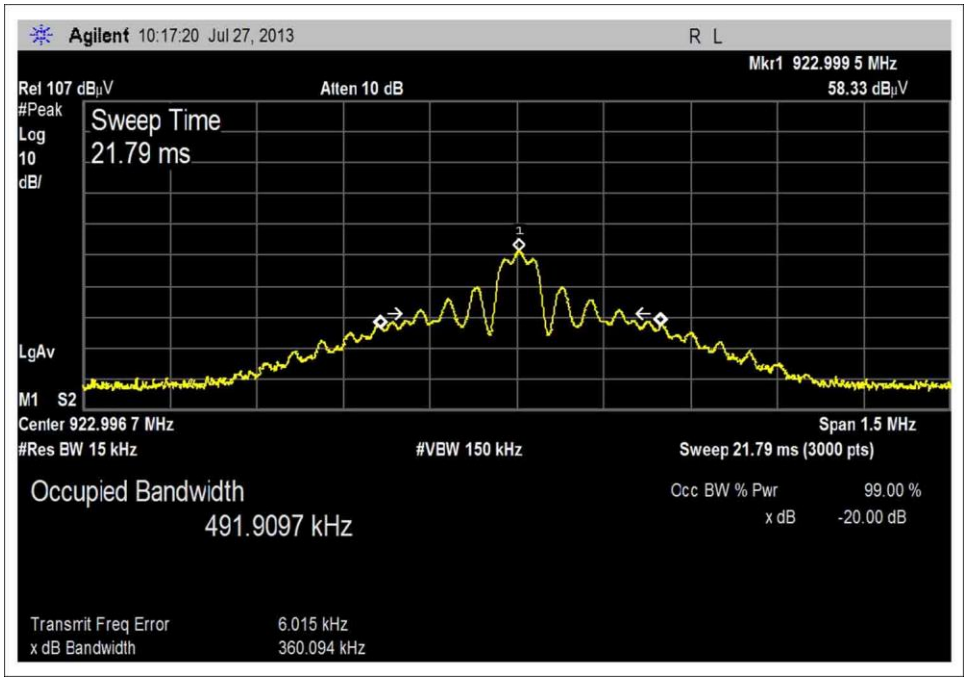
Software Used: C and is permanently burned into memory as binary machine language (two different processors, PIC and CC1110)

Temperature: 23.3°C
Humidity: 39 %
Atmospheric Pressure: 101.1 kPa
High Clock: 26MHz

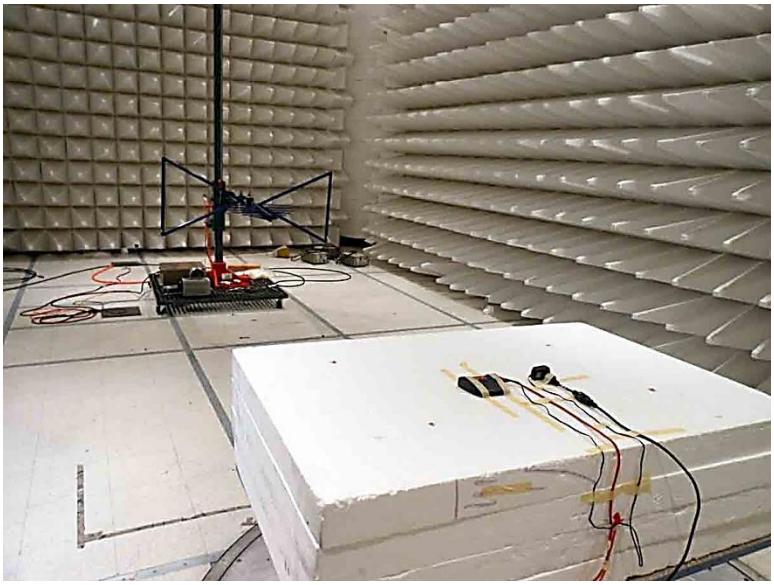
transmit operating frequency= 923MHz
RF Output= 0dBm
Gain of the antenna= +1 dBi

The EUT is a fixed device. It is placed on the 80cm Styrofoam table. The EUT is set in continue transmit. RJ 45 cable is looped back to active RJ 45 port.

Test Data



Test Setup Photos



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 dBµV/m, the spectrum analyzer reading in dBµV 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.