



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Code of Federal Regulations 47 Part 15 – Radio Frequency Devices

Subpart C – Intentional Radiators

Section 15.247

Operation within the bands 902 - 928 MHz,
2400 - 2483.5 MHz, 5725 - 5875 MHz,
and 24.0 - 24.25 GHz.

THE FOLLOWING **MEETS** THE ABOVE TEST SPECIFICATION

Formal Name: Striva Pro

Kind of Equipment: Wireless Stereo Headphone

Frequency Range: 2412 - 2462 MHz

Test Configuration: Portable

Model Number(s): STRIVA PRO (designated CC05 on test sample)

Model(s) Tested: STRIVA PRO

Serial Number(s): ACECF16DC0225000017C, F75E1D7FC02250000177,
29097570C02250000176, B5DD56E0C0225000017B

Date of Tests: September 19th through 22nd, 2011 and
December 8th through 13th, 2011

Test Conducted For: Koss Corporation
4129 North Port Washington Road
Milwaukee, WI, 53212, USA

NOTICE: “This test report relates only to the items tested and must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government”. Please see the "Description of Test Sample" page listed inside of this report.

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Company:
Model Tested:
Report Number:

Koss Corporation
STRIVA PRO
17287

SIGNATURE PAGE

Report By:

A handwritten signature in black ink that reads "Craig Brandt". The signature is written in a cursive style with a long horizontal stroke at the end.

Craig Brandt
Test Engineer

Reviewed By:

A handwritten signature in black ink that reads "William Stumpf". The signature is written in a cursive style with a long horizontal stroke at the end.

William Stumpf
OATS Manager

Approved By:

A handwritten signature in black ink that reads "Brian J. Mattson". The signature is written in a cursive style with a long horizontal stroke at the end.

Brian Mattson
General Manager



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United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 100276-0

D.L.S. Electronic Systems, Inc.
Wheeling, IL

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*



2010-10-01 through 2011-09-30

Effective dates

Jolly A. Bruce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)



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1.0 Summary of Test Report

It was determined that the Koss Corporation Striva Pro, Model STRIVA PRO, complies with the requirements of CFR 47 Part 15 Subpart C Section 15.247.

Subpart C Section 15.247 Applicable Technical Requirements Tested:

Section	Description	Procedure	Note	Compliant?
15.247(a)(2)	6 dB Emission Bandwidth	FCC Publication KDB 558074	1	Yes
15.247(b)(3)	Maximum Peak Conducted Output Power	FCC Publication KDB 558074	1	Yes
15.247(d)	RF Conducted Spurious	FCC Publication KDB 558074	1	Yes
15.247(d)	Band Edge	FCC Publication KDB 558074	1,2	Yes
15.247(e)	Power Spectral Density	FCC Publication KDB 558074	1	Yes
15.247 (d), 15.205	Radiated Harmonics in Restricted Band	ANSI C63.4-2009 & ANSI C63.10-2009	2	Yes
15.247(d), 15.205(c), 15.209(a)	Radiated Spurious Emissions other than Harmonics	ANSI C63.4-2009 & ANSI C63.10-2009	2	Yes
15.35(c)	Duty Cycle	ANSI C63.4-2009 & ANSI C63.10-2009		NA
15.207(a)	AC Line Conducted Emissions	ANSI C63.4-2009 & ANSI C63.10-2009		Yes

Note 1: RF conducted measurement.

Note 2: Radiated emission measurement.

2.0 Introduction

In September and December, 2011 the Striva Pro, Model STRIVA PRO, as provided from Koss Corporation, was tested to the requirements of CFR 47 Part 15 Subpart C Section 15.247. To meet these requirements, the procedures contained within this report were performed by personnel of D.L.S Electronic Systems, Inc.



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3.0 Test Facilities

D.L.S. Electronic Systems, Inc. is a full service EMC/Safety Testing Laboratory accredited to ISO 17025. NVLAP Certificate and Scope can be viewed at <http://www.dlsemc.com/certificate>. Our facilities are registered with the FCC, Industry Canada, and VCCI.

Wisconsin Test Facility:

D.L.S. Electronic Systems, Inc.
166 S. Carter Street
Genoa City, Wisconsin 53128

Wheeling Test Facility:

D.L.S. Electronic Systems, Inc.
1250 Peterson Drive
Wheeling, IL 60090

4.0 Description of Test Sample

Description:

The Striva Pro is a stereo headphone of normal size, designed for over-the-ear fit. It has an adjustable headband with hinged earphone yokes that allow the ear cups to fold flat for storage. The ear cups are black with red accents. On the right ear cup is a 5-way direction switch with indicating LEDs on the face of the ear cup, and a mini-USB jack on the lower rim of the ear cup. The model and serial numbers are on a label affixed to the lower rim of the left ear cup. Functionally, the unit is a wireless receiver, using WiFi to stream music from a remote source.

Type of Equipment / Frequency Range:

Portable / 2412-2462 MHz

Physical Dimensions of Equipment Under Test:

Length: 7 in. Width: 8.5 in. Height: 3.5 in.

Power Source:

3.7 VDC rechargeable battery or USB powered.

Internal Frequencies:

2000 or 1000 kHz;

40, 24 MHz

Transmit / Receive Frequencies Used For Test Purpose:

Section 15.247: Low channel: 2412 MHz, Middle channel: 2437 MHz,
High channel: 2462 MHz



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Type of Modulation(s) / Antenna Type:

CSMA/CA / SMT Chip antenna (+2 dBi gain)

Description of Circuit Board(s) / Part Number:

Main PCB	CC05rev6
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Crystal Information

Compliance testing was done using the ECS P/N 400-8-36-CKM-740 crystal and re-verified using the KDS P/N 1B940000BB0A crystal. Both crystals have the same specifications. No difference was noted.



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5.0 Test Equipment

A list of the equipment used can be found in the table below. All primary equipment was calibrated against known reference standards with a verified traceable path to NIST.

D.L.S. Wisconsin

Description	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Dates	Cal Due Dates
Receiver	Rohde & Schwarz	ESI 40	837808/005	20 Hz – 40 GHz	7/17/11	7/17/12
Preamplifier	Rohde & Schwarz	TS-PR10	032001/003	9 kHz – 1 GHz	1/11/11	1/11/12
Antenna	EMCO	3104C	9810-4849	20 MHz – 200 MHz	2/16/10	2/16/12
Antenna	EMCO	3146	1604	200 MHz – 1 GHz	8/25/10	8/25/12
Preamp	Ciao	CA118-4010	101	1GHz-18GHz	1/25/11	1/25/12
Horn Antenna	EMCO	3115	9502-4451	1-18GHz	4/11/11	4/11/13
Filter- High-Pass	Q-Microwave	100462	1	4.2GHz-18GHz	5/3/11	5/3/12
Preamp	Miteq	AMF-8B-180265-40-10P-H/S	438727	18GHz-26GHz	8/5/11	8/5/12
Horn Antenna	A.H. Systems	SAS-574	222	18 – 40GHz	5/4/10	5/4/12
High Pass Filter	Planar Filter Co.	CL22600-9000-CD-SS	PF1229/7728	18 – 40GHz	8/3/11	8/3/12
Receiver	Rohde & Schwarz	ESI 40	837808/006	20 Hz – 40 GHz	4/11/11	4/11/12
LISN	Solar	9252-50-R-24-BNC	961019	9 kHz – 30 MHz	6/6/11	6/6/12
Filter- High-Pass	SOLAR	7930-120	090702	120 kHz – 30 MHz	1/11/11	1/11/12
Limiter	Electro-Metrics	EM-7600	706	9 kHz – 30 MHz	1/11/11	1/11/12
20 dB attenuator	Aeroflex/weinsche 1	75A-20-12	1071	DC – 40 GHz	6/29/11	6/29/12
20 dB attenuator	Anritsu	42N50-20	451	DC – 18 GHz	1/11/11	1/11/12
Wideband Power Meter	Anritsu	ML2487A	SK00002069	100 kHz – 65 GHz	3/4/11	3/4/12
Power Sensor	Anritsu	MA2490A	031563	50 MHz – 8 GHz	3/7/11	3/7/12



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6.0 Test Arrangements

Radiated Emissions Measurement Arrangement:

All radiated emission measurements were performed at D.L.S. Electronic Systems, Inc. and set up according to ANSI C63.4-2009 and ANSI C63.10-2009, unless otherwise noted. Description of procedures and measurements can be found in Appendix B – Measurement Data. See Appendix A for additional photos of the test set up.

Unless otherwise noted, the bandwidth of the measuring receiver / analyzer used during testing is shown below.

Frequency Range	Bandwidth (-6 dB)
10 to 150 kHz	200 Hz
150 kHz to 30 MHz	9 kHz
30 MHz to 1 GHz	120 kHz
Above 1 GHz	1 MHz

RF Conducted Emissions Measurement Arrangement:

All RF conducted emission measurements were performed at D.L.S. Electronic Systems, Inc. and set up according to ANSI C63.4-2009 and ANSI C63.10-2009, unless otherwise noted. Description of procedures and measurements can be found in Appendix B – Measurement Data. See Appendix A for additional photos of the test set up.

7.0 Test Conditions

Normal Test Conditions:

Temperature and Humidity:

70°F at 50% RH

Supply Voltage:

3.7 VDC



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8.0 Modifications Made To EUT For Compliance

Section 15.247: No modifications made at time of test.

9.0 Additional Descriptions

The EUT was connected to the measuring equipment through a temporary connector/cable for RF conducted measurements.

Special test software was installed in the EUT for measurements requiring the EUT to transmit continuously at a single channel.

The test sample was designated as model CC05. This model number was only used for the test sample.

10.0 Results

Measurements were performed in accordance with ANSI C63.4-2009 and ANSI C63.10-2009. Graphical and tabular data can be found in Appendix B at the end of this report.

11.0 Conclusion

The Striva Pro, Model STRIVA PRO, as provided from Koss Corporation, tested in September and December, 2011 **meets** the requirements of CFR 47 Part 15 Subpart C Section 15.247.

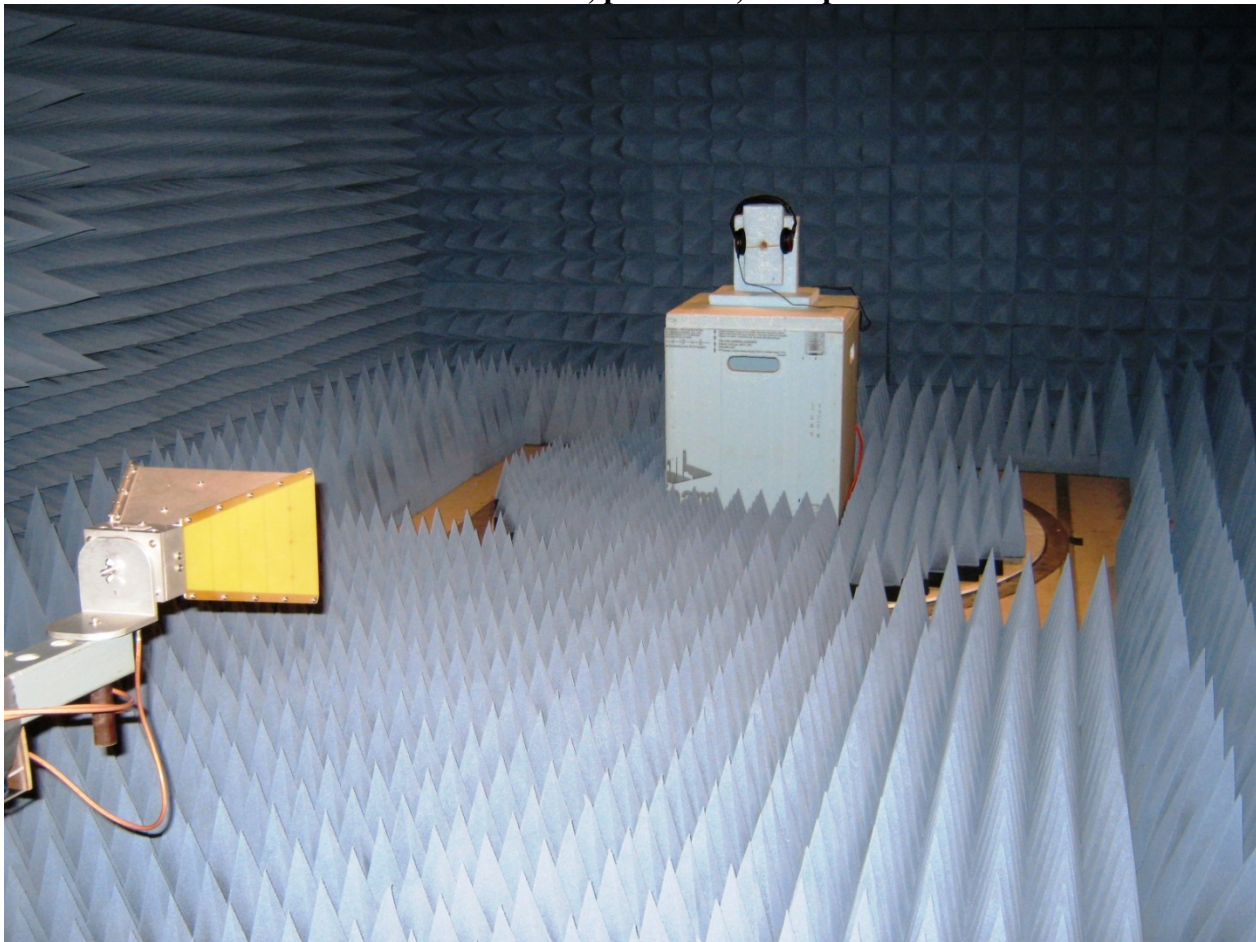
Appendix A – Test Photos

Photo Information and Test Setup:

- Item0: Striva Pro, Model STRIVA PRO
- Item1: One meter shielded USB cable with metal connectors
- Item2: I.T.E. Power Supply model SAW06-05.0-1000USC

Radiated Emissions

Above 1 GHz, position 1, USB powered



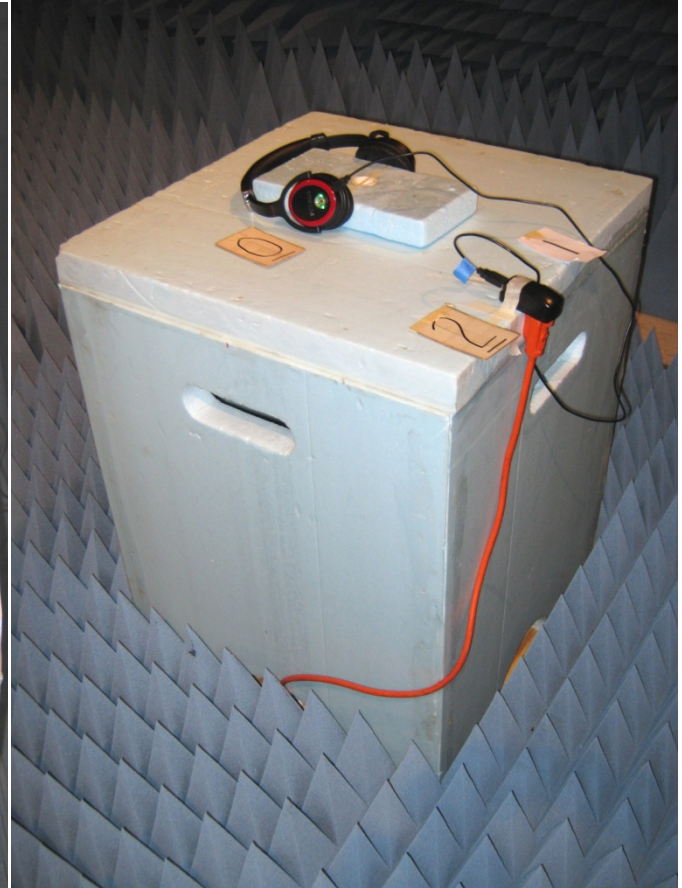
Appendix A

Radiated Emissions

Above 1 GHz, position 2, USB powered



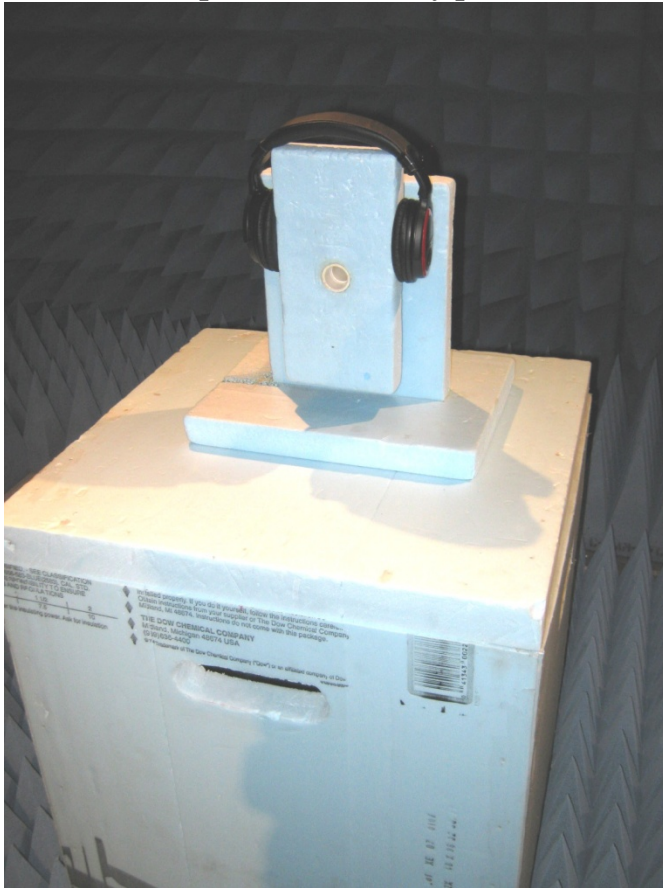
Above 1 GHz, position 3, USB powered



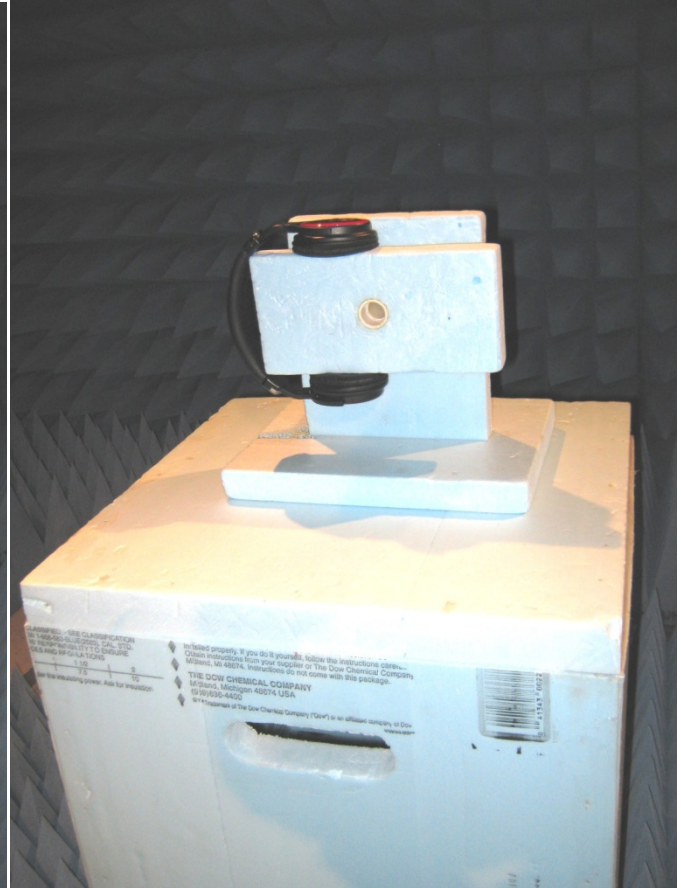
Appendix A

Radiated Emissions

Above 1 GHz, position 1, battery powered



Above 1 GHz, position 2, battery powered



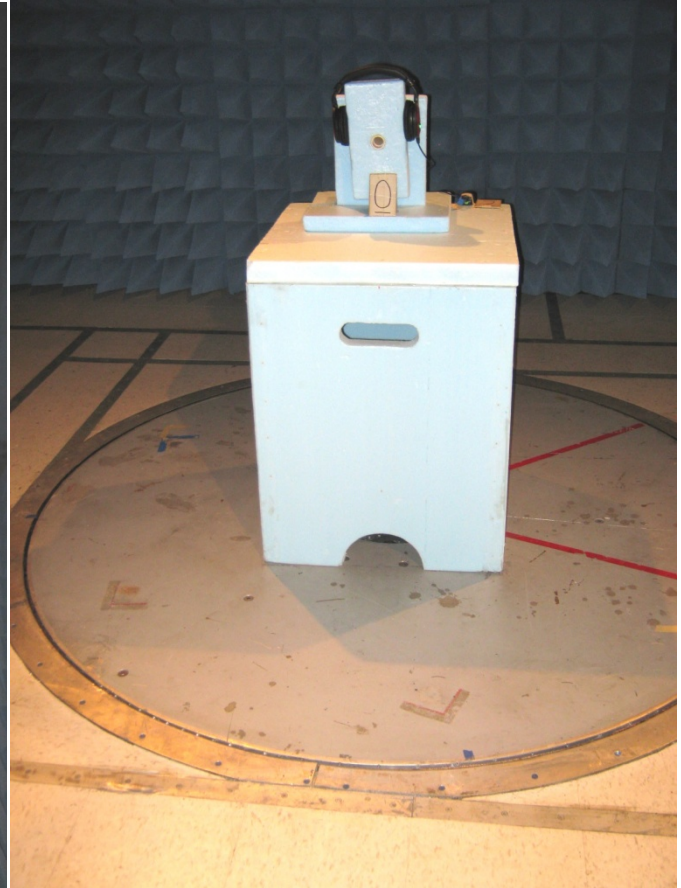
Appendix A

Radiated Emissions

Above 1 GHz, position 3, battery powered



Below 1 GHz, position 1, USB powered



Appendix A

Radiated Emissions

Below 1 GHz, position 2, USB powered



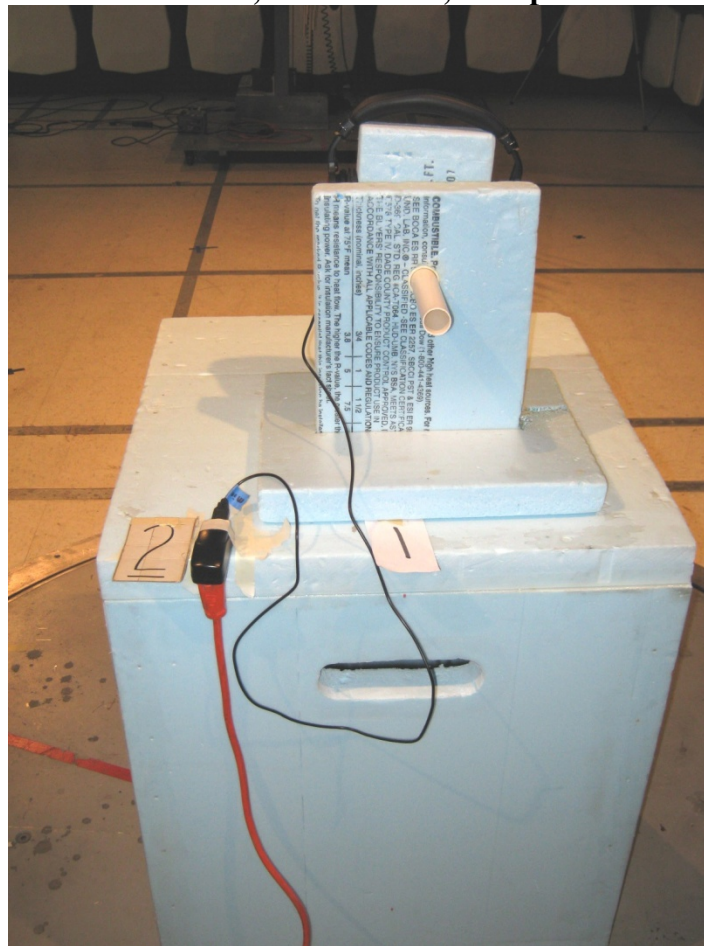
Below 1 GHz, position 3, USB powered



Appendix A

Radiated Emissions

Below 1 GHz, back of EUT, USB powered



Appendix A

RF Conducted Emissions



Output Power



Appendix A

AC Line Conducted Emissions - Front



AC Line Conducted Emissions - Back





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Appendix B – Measurement Data

B1.0 6 dB Emission Bandwidth – 802.11g mode

Rule Part: FCC Part 15.247(a)(2)

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

Limit: Must be greater than 500 kHz.

Results: Compliant

Notes: The EUT was set to transmit at its maximum power, maximum data rate, and maximum duty cycle.



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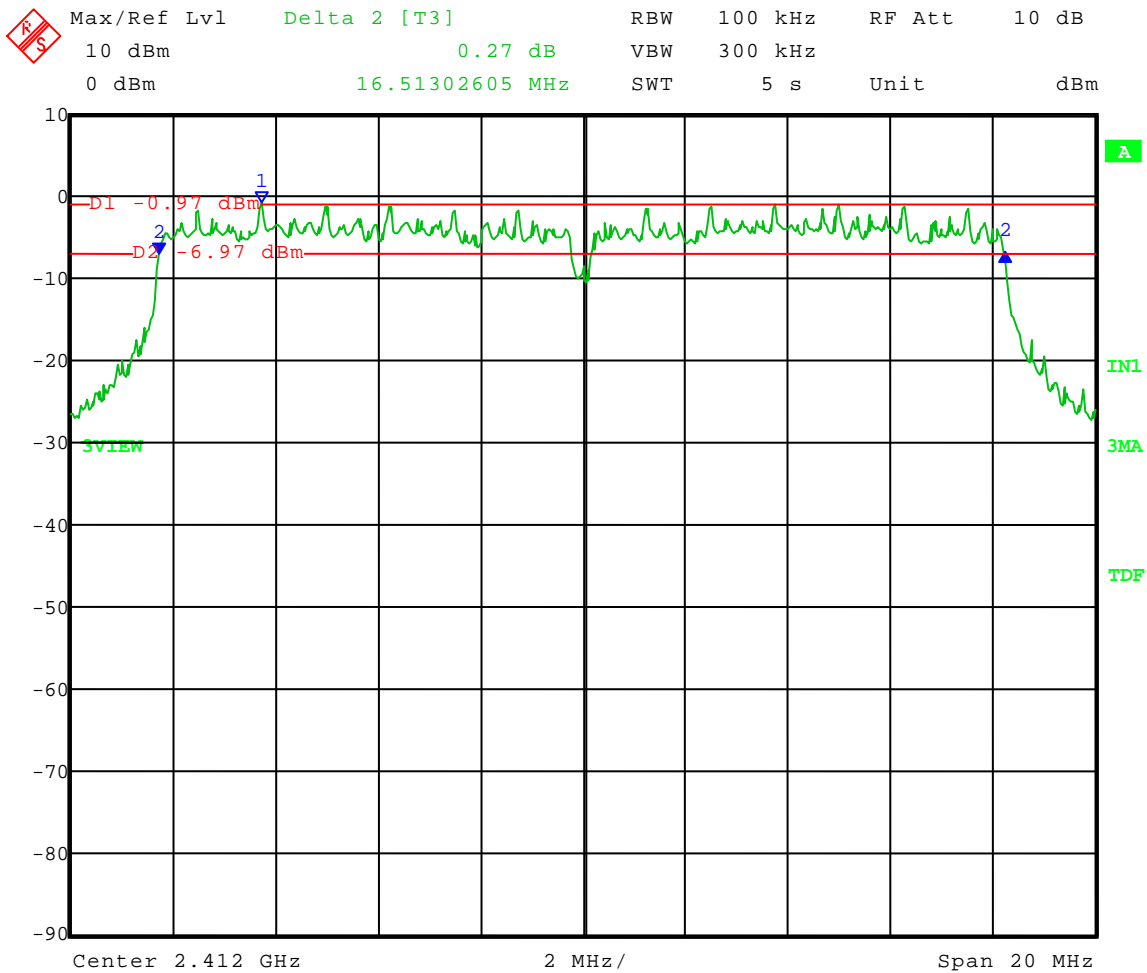
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Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: 6 dB Bandwidth - Conducted
Operator: Craig B

Comment: **Low Channel**: Frequency – 2.412 GHz
802.11g

6 dB Bandwidth = 16.5 MHz



Date: 21.SEP.2011 09:08:25



Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

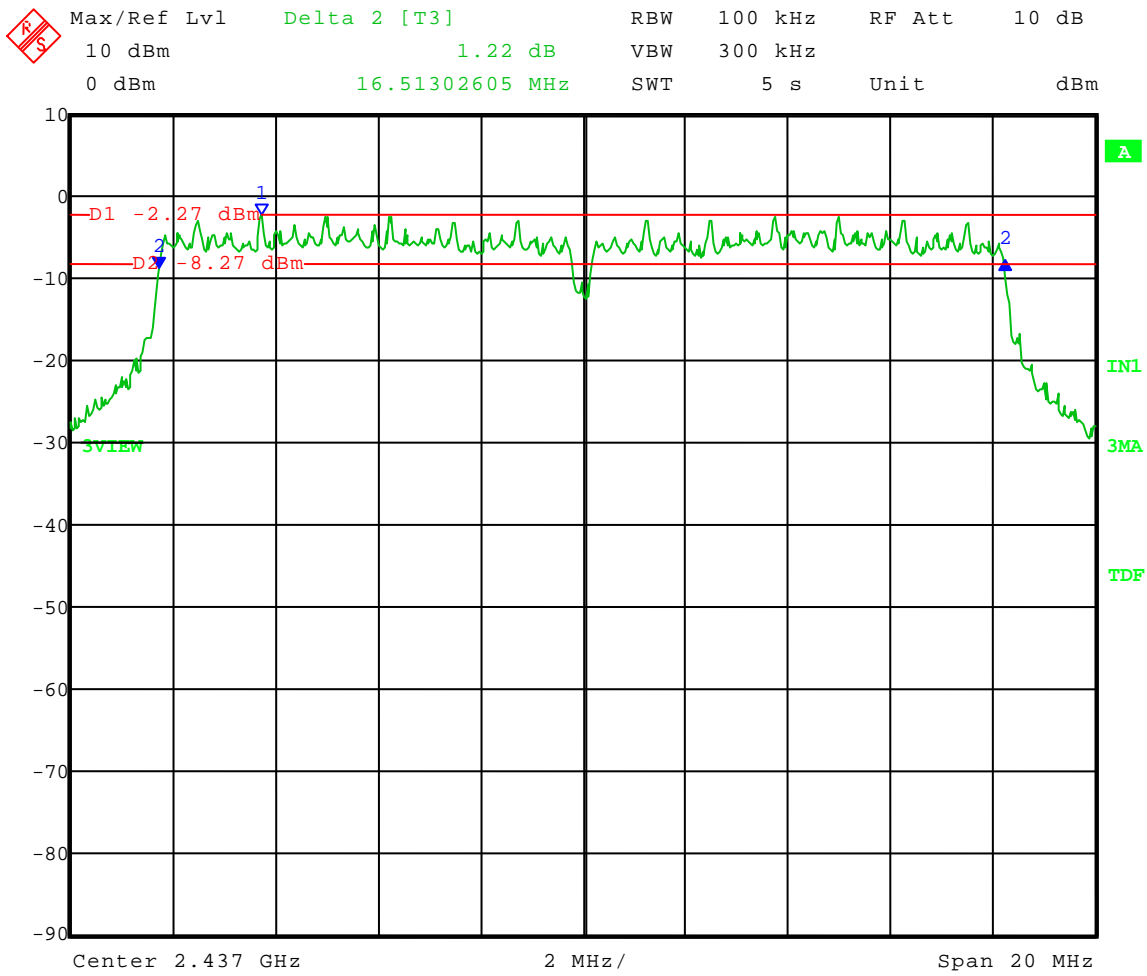
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Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: 6 dB Bandwidth - Conducted
Operator: Craig B

Comment: **Middle Channel:** Frequency – 2.437 GHz
802.11g

6 dB Bandwidth = 16.5 MHz



Date: 21.SEP.2011 09:20:25



Company: Koss Corporation
 Model Tested: STRIVA PRO
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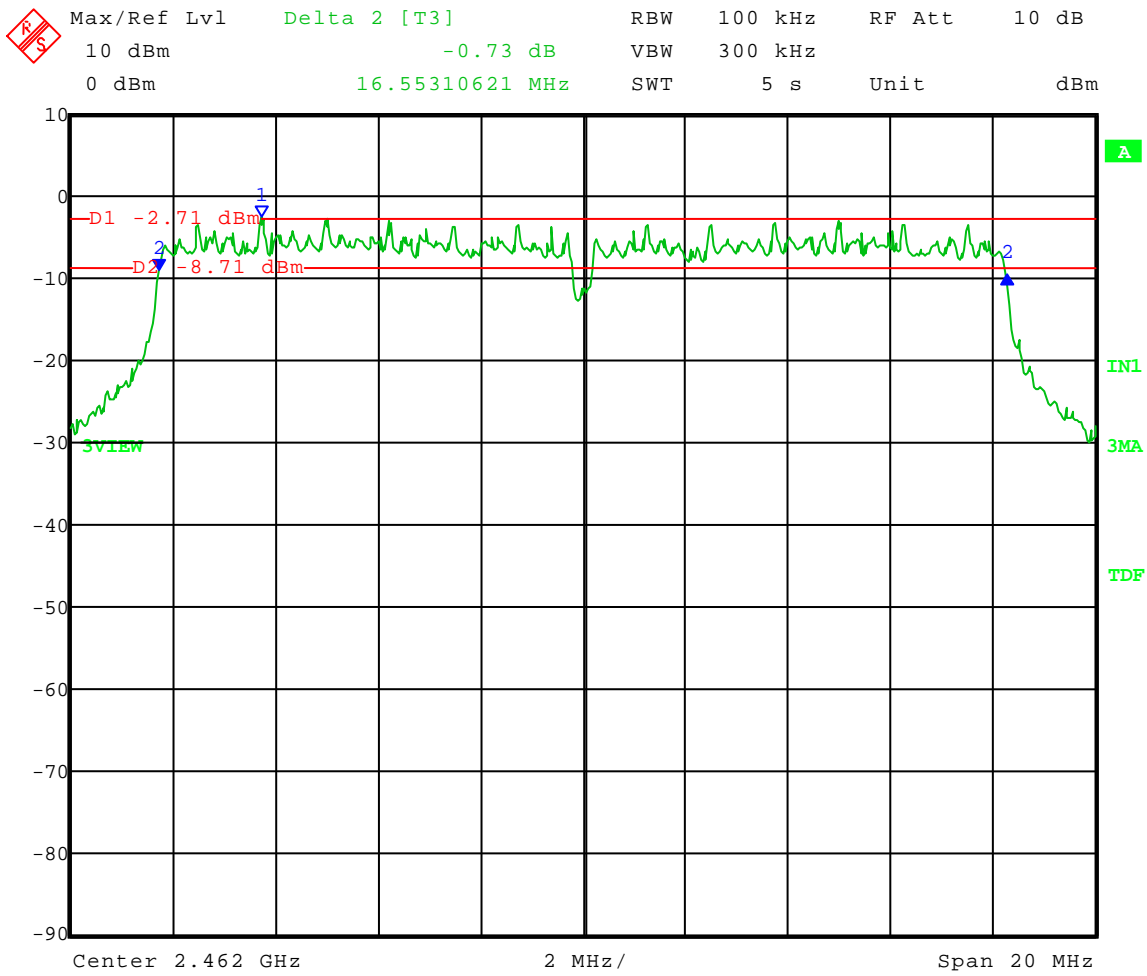
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Appendix B – Measurement Data

Test Date: 09-21-2011
 Company: Koss Corporation
 EUT: CC05
 Test: 6 dB Bandwidth - Conducted
 Operator: Craig B

Comment: **High Channel**: Frequency – 2.462 GHz
 802.11g

6 dB Bandwidth = 16.5 MHz



Date: 21.SEP.2011 09:24:22



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Appendix B – Measurement Data

B1.1 6 dB Emission Bandwidth – 802.11b mode

Rule Part: FCC Part 15.247(a)(2)

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

Limit: Must be greater than 500 kHz.

Results: Compliant

Notes: The EUT was set to transmit at its maximum power, maximum data rate, and maximum duty cycle.



Company: Koss Corporation
 Model Tested: STRIVA PRO
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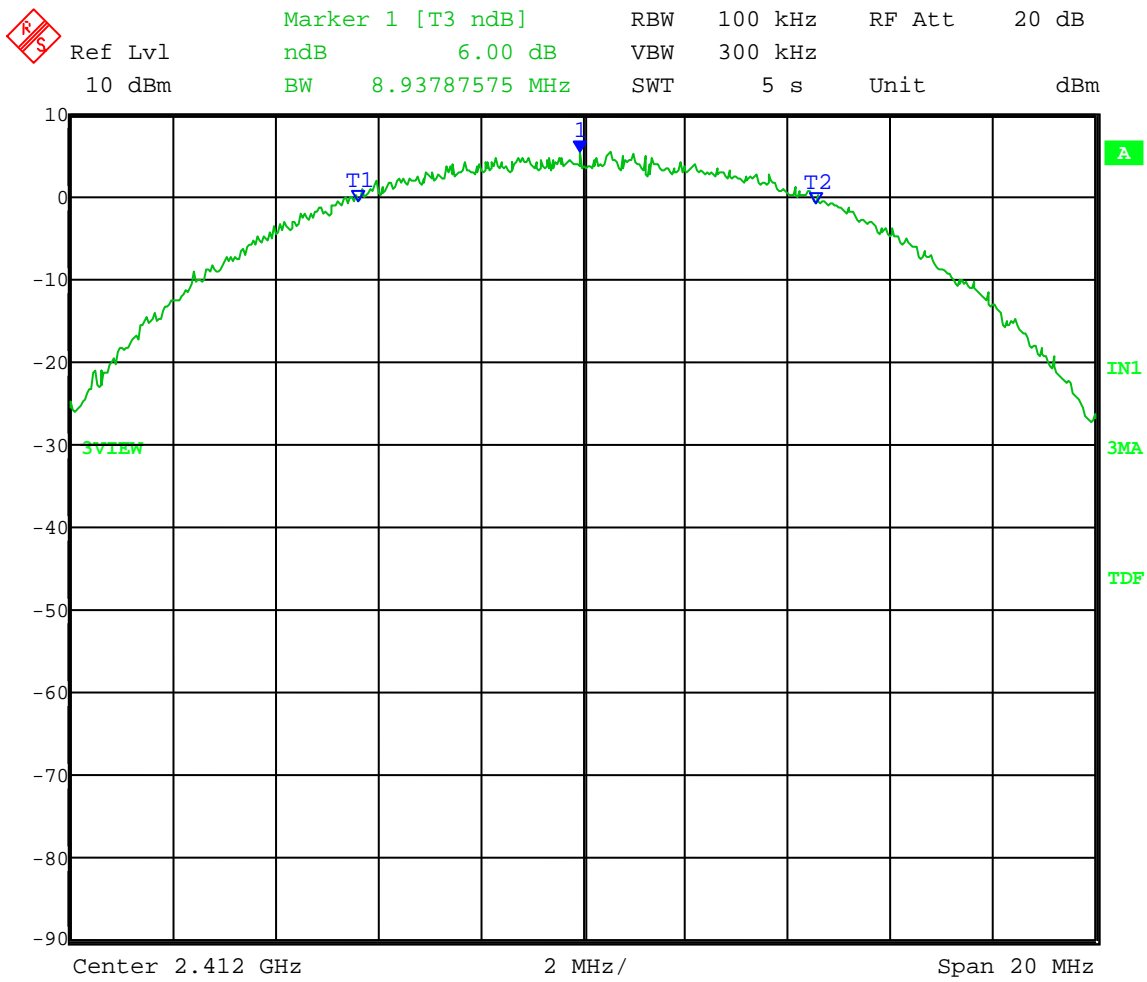
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Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: 6 dB Bandwidth - Conducted
 Operator: Craig B

Comment: **Low Channel**: Frequency – 2.412 GHz
 802.11b

6 dB Bandwidth = 8.94 MHz



Date: 12.DEC.2011 13:00:40



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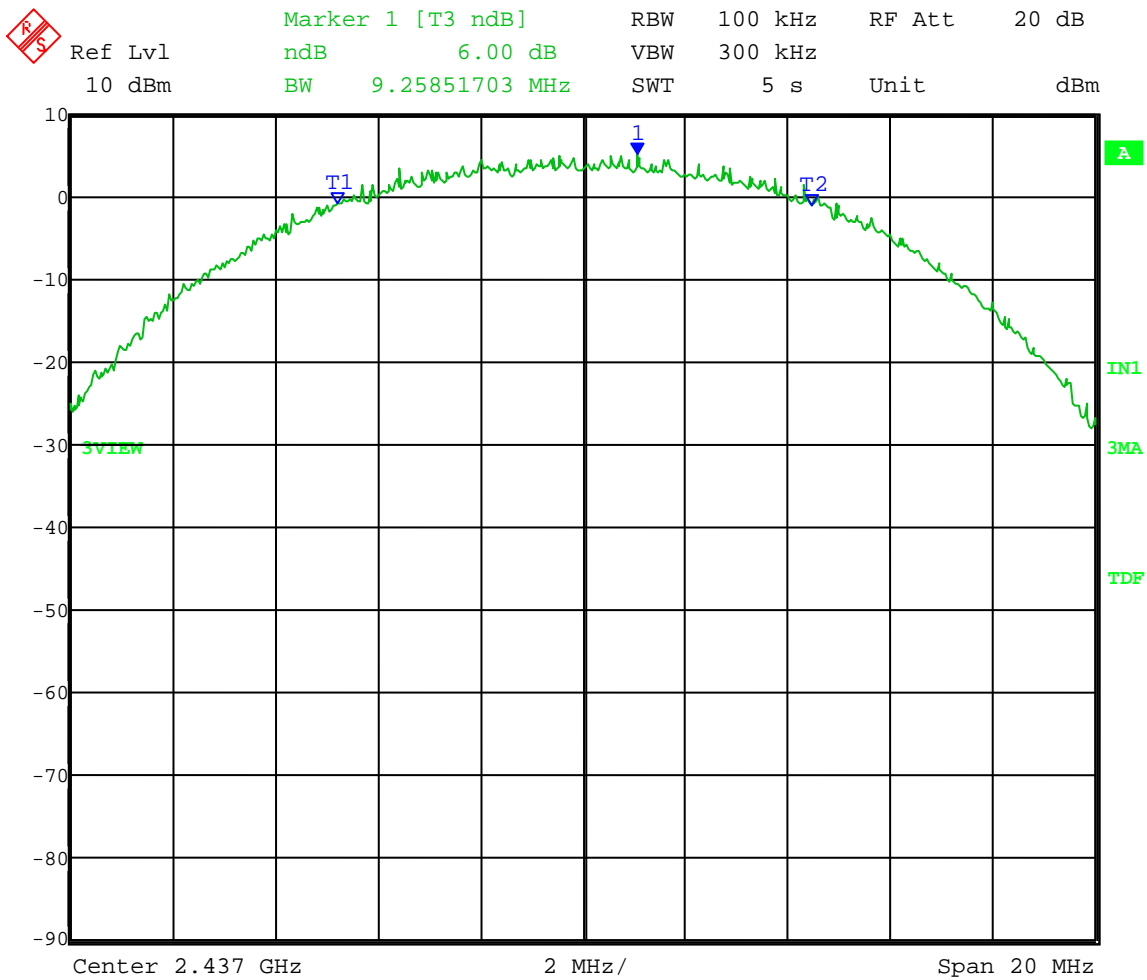
Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

Test Date: 12-12-2011
Company: Koss Corporation
EUT: CC05
Test: 6 dB Bandwidth - Conducted
Operator: Craig B

Comment: **Middle Channel:** Frequency – 2.437 GHz
802.11b

6 dB Bandwidth = 9.26 MHz



Date: 12.DEC.2011 14:09:31



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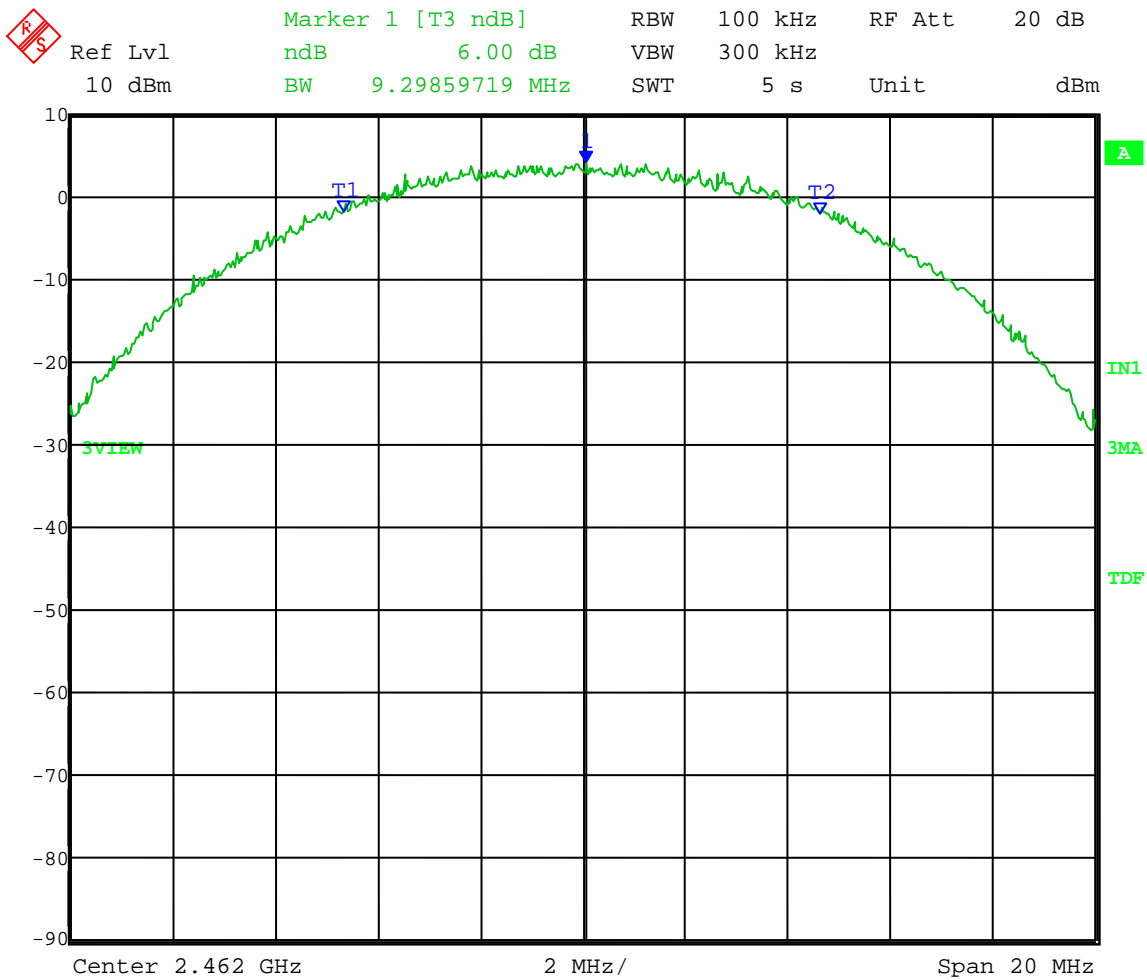
Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

Test Date: 12-12-2011
Company: Koss Corporation
EUT: CC05
Test: 6 dB Bandwidth - Conducted
Operator: Craig B

Comment: **High Channel:** Frequency – 2.462 GHz
802.11b

6 dB Bandwidth = 9.30 MHz



Date: 12.DEC.2011 13:46:02



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Company: Koss Corporation
Model Tested: STRIVA PRO
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Appendix B – Measurement Data

B2.0 Peak Output Power – 802.11g mode

Rule Part: FCC Part 15.247(b)(3)

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

Limit: 1 Watt (30 dBm)

Results: Compliant

Notes: The EUT was set to transmit at its maximum power, maximum data rate, and maximum duty cycle. Output Power Option 1 was used for this test. Peak Output power was measured with a broadband power meter and power sensor.



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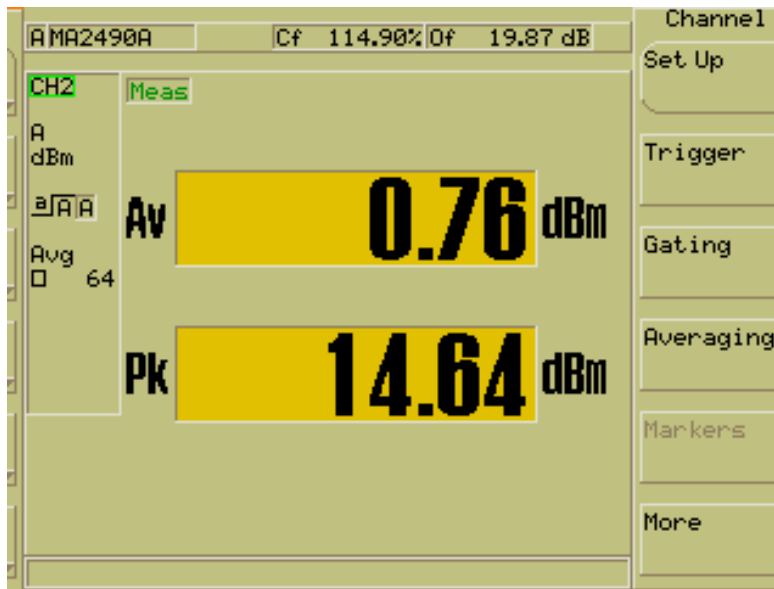
Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

Test Date: 09-19-2011
Company: Koss Corporation
EUT: CC05
Test: Peak Power Output - Conducted
Operator: Craig B

Comment: **Low Channel**: Frequency – 2.412 GHz
802.11g

Peak Output Power = 14.64 dBm = **29.1 mW**





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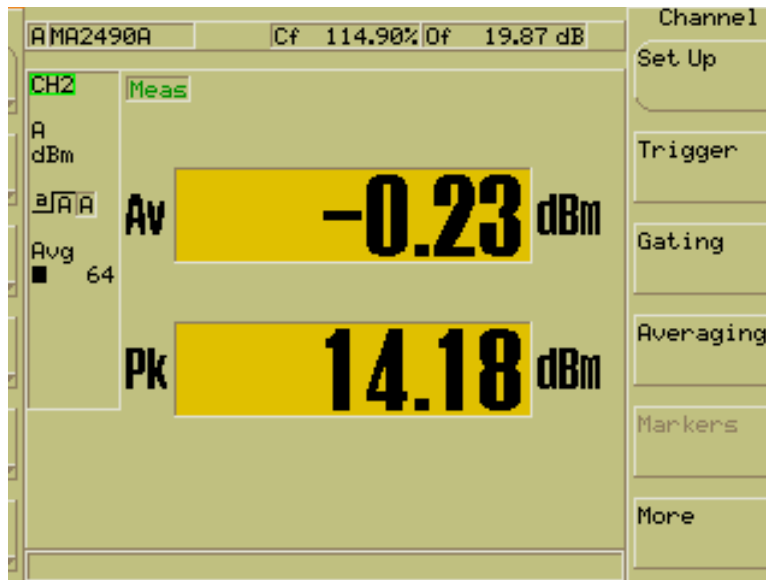
Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

Test Date: 09-19-2011
Company: Koss Corporation
EUT: CC05
Test: Peak Power Output - Conducted
Operator: Craig B

Comment: **Mid Channel**: Frequency – 2.437 GHz
802.11g

Peak Output Power = 14.18 dBm = **26.2 mW**





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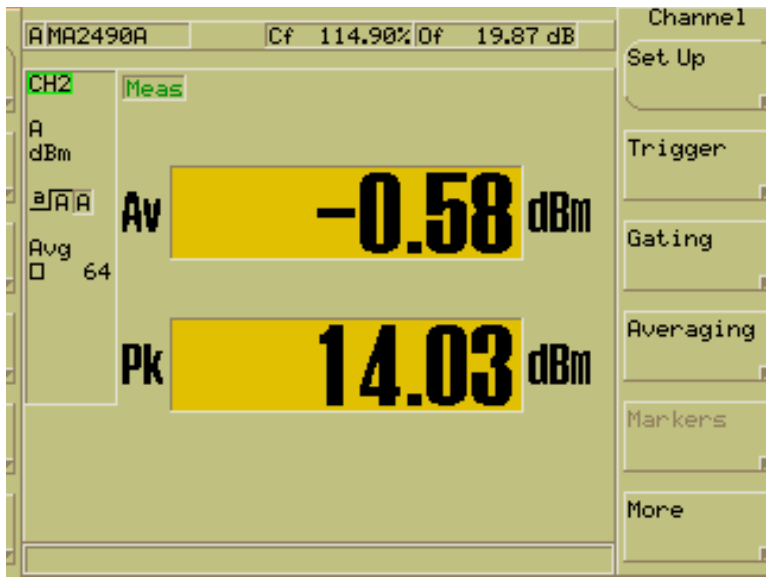
Company: Koss Corporation
Model Tested: STRIVA PRO
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Appendix B – Measurement Data

Test Date: 09-19-2011
Company: Koss Corporation
EUT: CC05
Test: Peak Power Output - Conducted
Operator: Craig B

Comment: **High Channel**: Frequency – 2.462 GHz
802.11g

Peak Output Power = 14.03 dBm = **25.3 mW**





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Appendix B – Measurement Data

B2.1 Peak Output Power – 802.11b mode

Rule Part: FCC Part 15.247(b)(3)

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

Limit: 1 Watt (30 dBm)

Results: Compliant

Notes: The EUT was set to transmit at its maximum power, maximum data rate, and maximum duty cycle. Output Power Option 1 was used for this test. Peak Output power was measured with a broadband power meter and power sensor.



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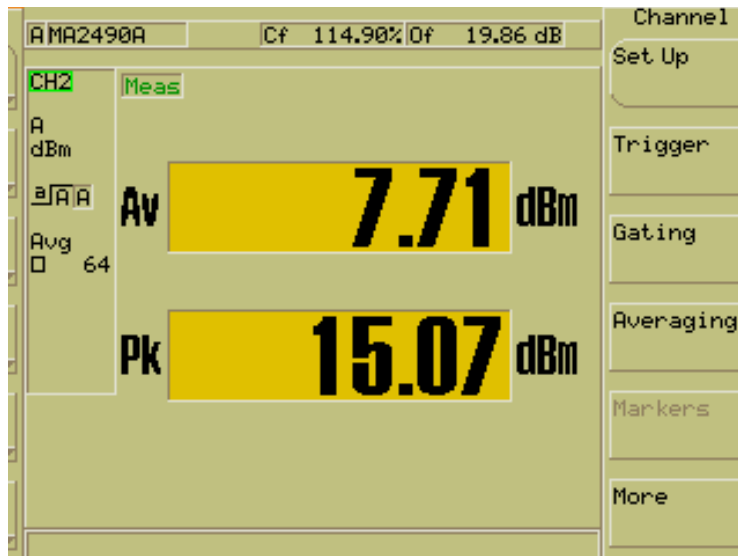
Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

Test Date: 12-13-2011
Company: Koss Corporation
EUT: CC05
Test: Peak Power Output - Conducted
Operator: Craig B

Comment: **Low Channel:** Frequency – 2.412 GHz
802.11b

Peak Output Power = 15.07 dBm = **32.1 mW**





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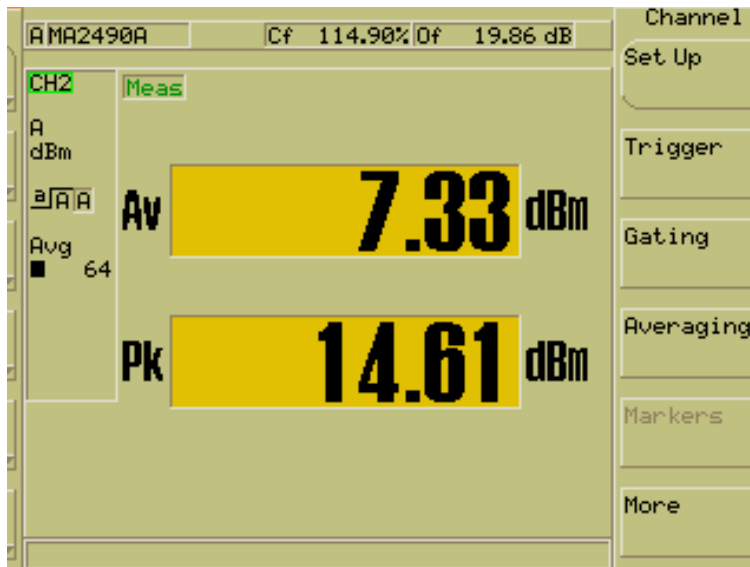
Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

Test Date: 12-13-2011
Company: Koss Corporation
EUT: CC05
Test: Peak Power Output - Conducted
Operator: Craig B

Comment: **Mid Channel:** Frequency – 2.437 GHz
802.11b

Peak Output Power = 14.61 dBm = **28.9 mW**





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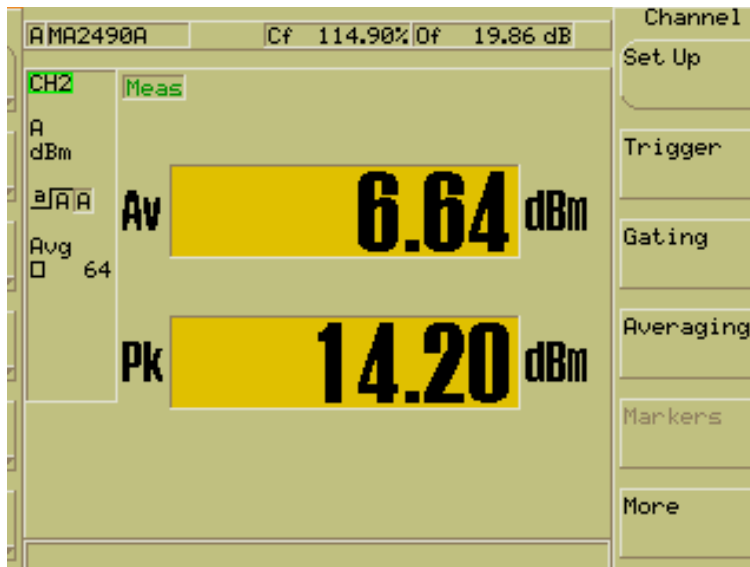
Company: Koss Corporation
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Appendix B – Measurement Data

Test Date: 12-13-2011
Company: Koss Corporation
EUT: CC05
Test: Peak Power Output - Conducted
Operator: Craig B

Comment: **High Channel:** Frequency – 2.462 GHz
802.11b

Peak Output Power = 14.20 dBm = **26.3 mW**





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Company: Koss Corporation
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Appendix B – Measurement Data

B3.0 RF Conducted Spurious Emissions – 802.11g mode

Rule Part: FCC Part 15.247(d)

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

Limit: 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. (Device complies with Power Option 1).

Results: Compliant

Notes: The EUT was set to transmit at its maximum power, maximum data rate, and maximum duty cycle. A peak detector was used for this test.



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Company: Koss Corporation
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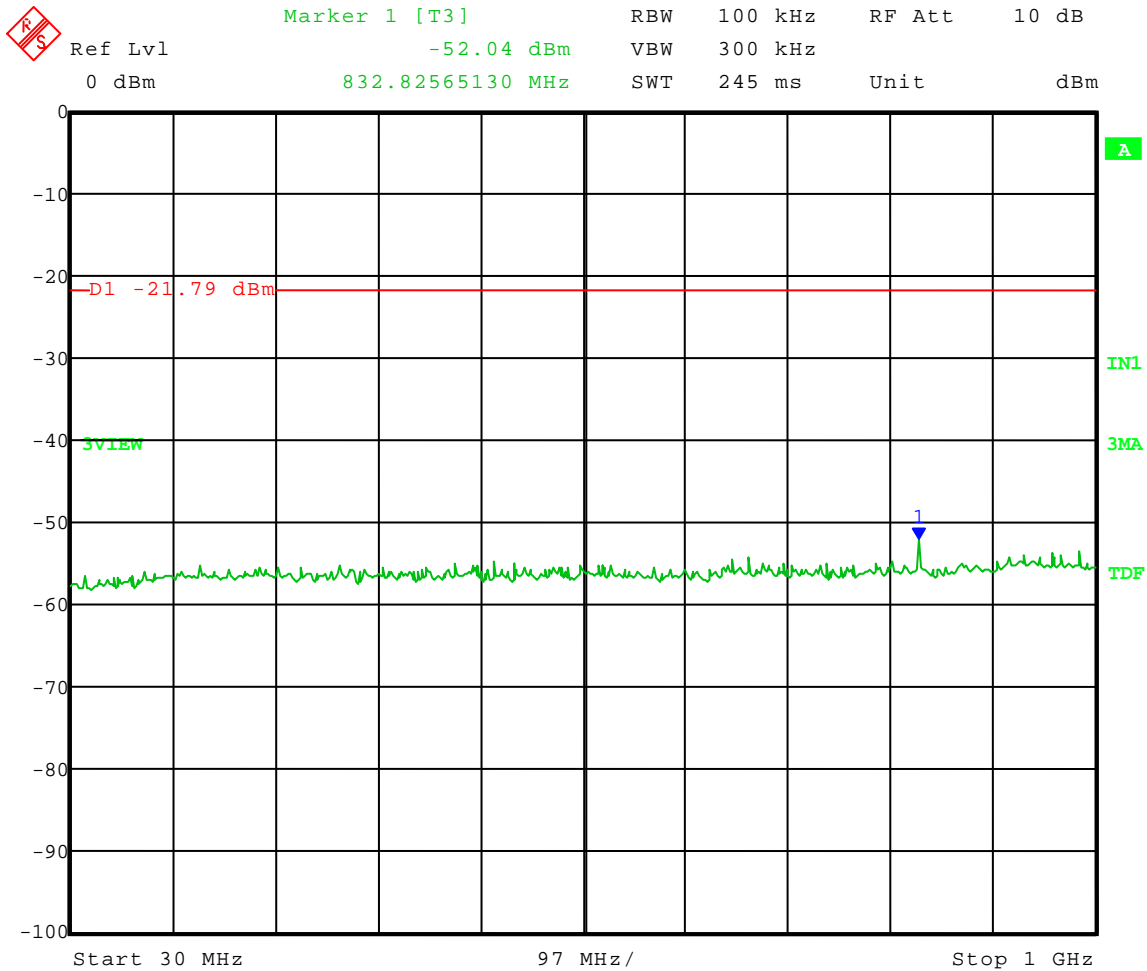
Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: Spurious Emissions - Conducted
Operator: Craig B

Comment: **Low Channel** Transmit = 2.412 GHz
802.11g

Frequency Range: 30 to 1000 MHz
Limit = -21.79 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:35:21



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

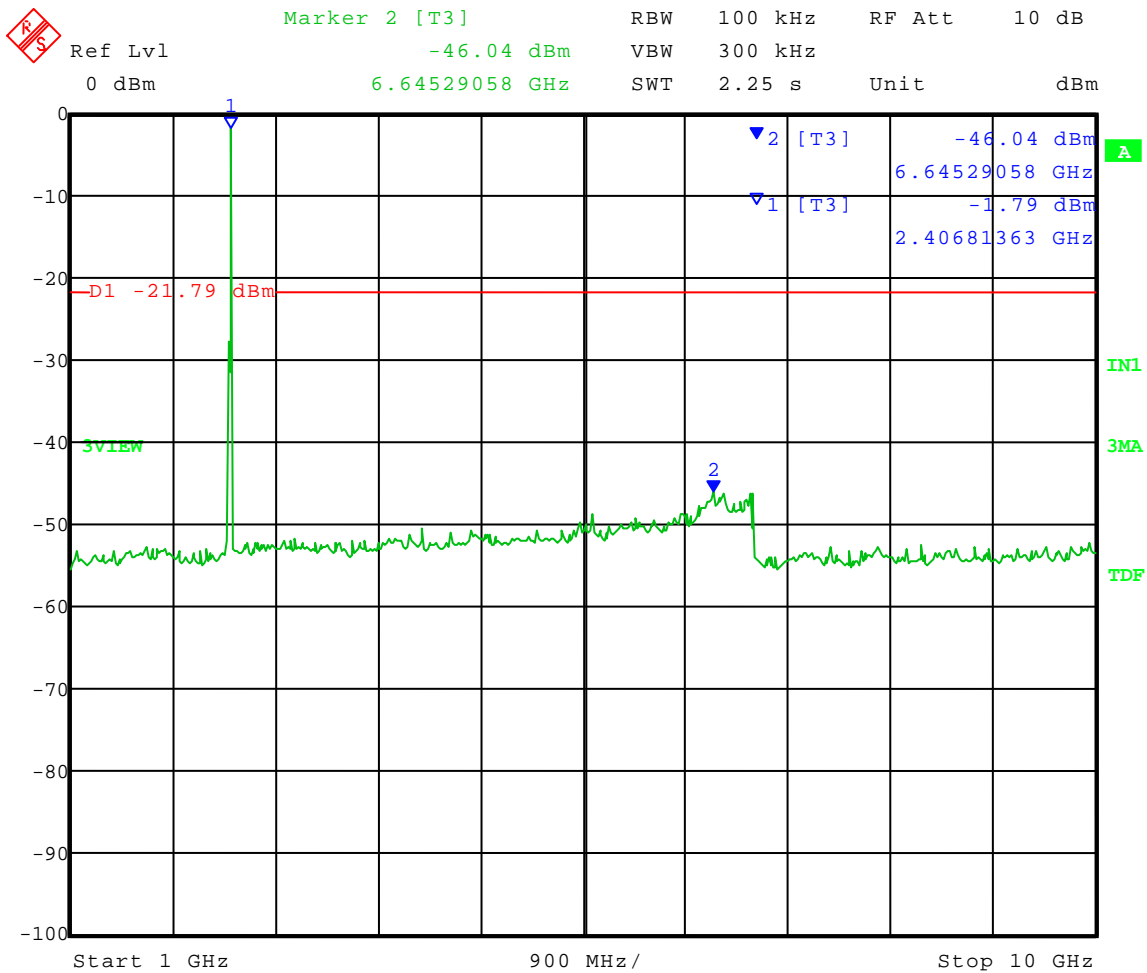
Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: Spurious Emissions - Conducted
Operator: Craig B

Comment: **Low Channel** Transmit = 2.412 GHz
802.11g

Frequency Range: 1 to 10 GHz
Limit = -21.79 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:30:04



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

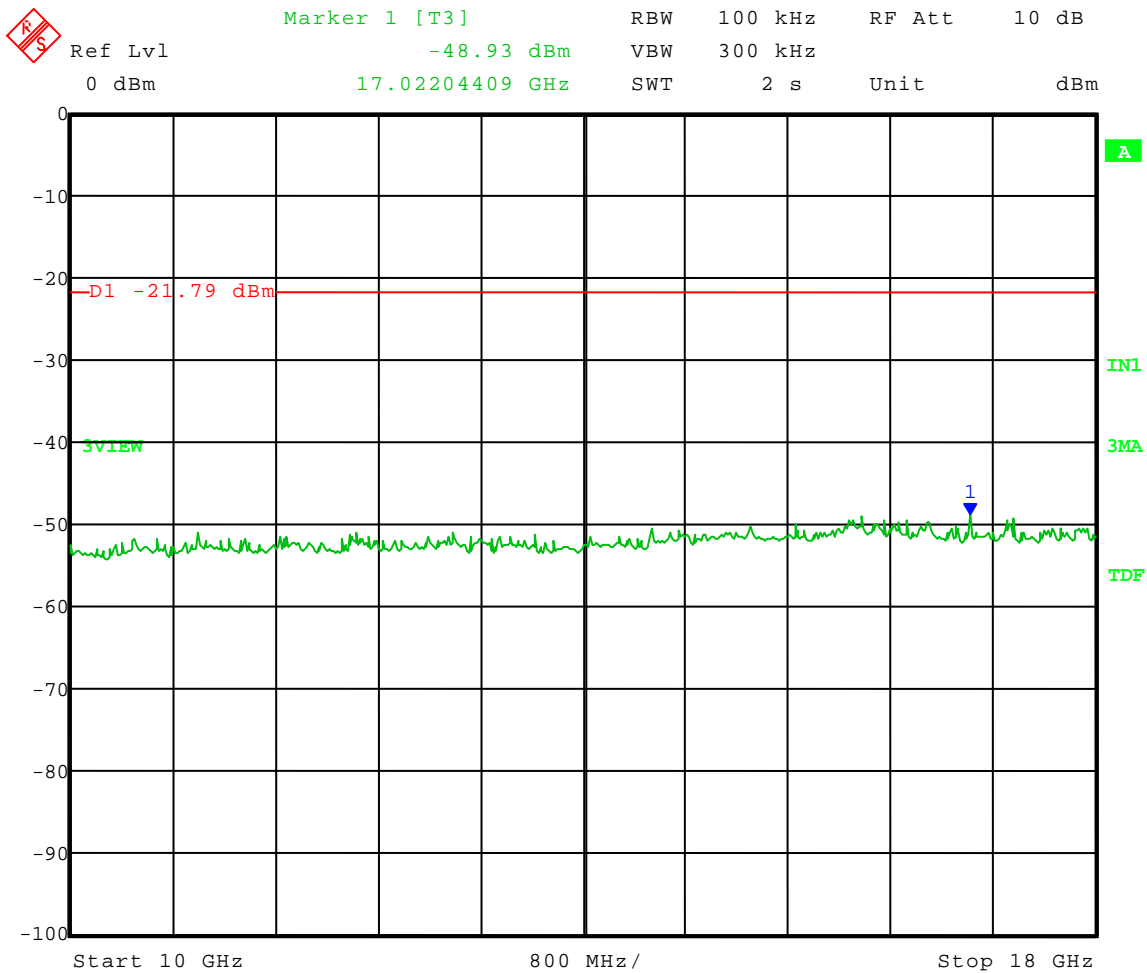
Appendix B – Measurement Data

Test Date: 09-21-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **Low Channel** Transmit = 2.412 GHz
 802.11g

Frequency Range: 10 to 18 GHz
 Limit = -21.79 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:32:18



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

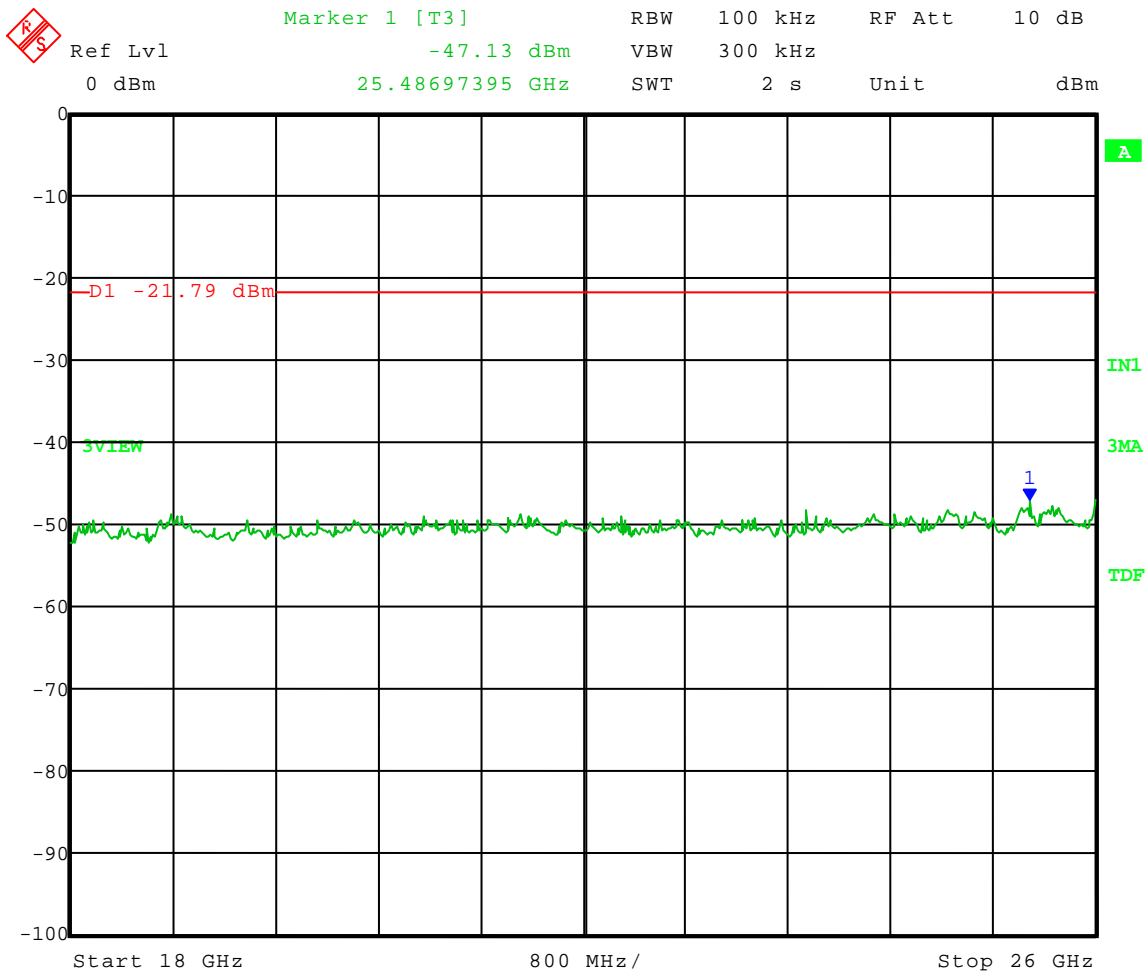
Appendix B – Measurement Data

Test Date: 09-21-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **Low Channel** Transmit = 2.412 GHz
 802.11g

Frequency Range: 18 to 26 GHz
 Limit = -21.79 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:33:42



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

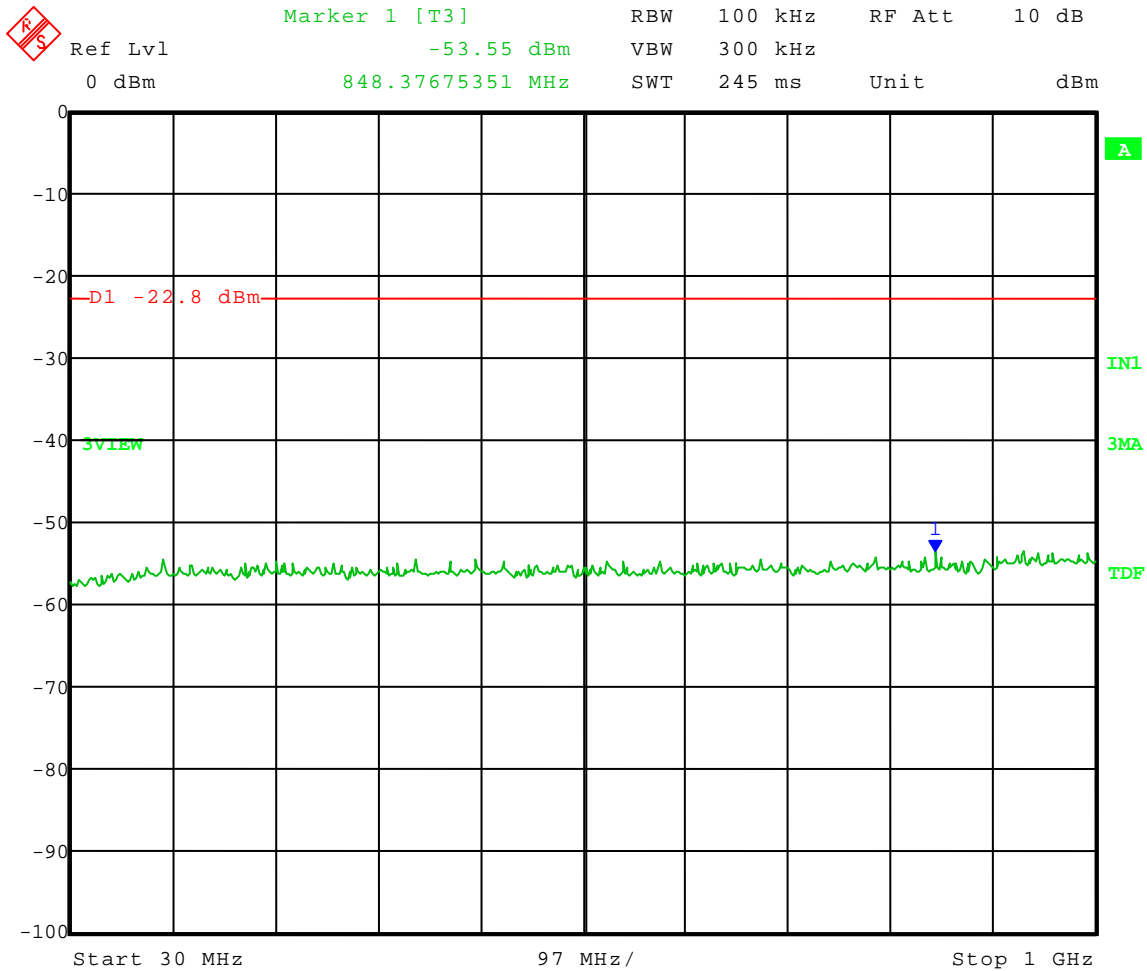
Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: Spurious Emissions - Conducted
Operator: Craig B

Comment: **Middle Channel** Transmit = 2.437 GHz
802.11g

Frequency Range: 30 to 1000 MHz
Limit = -22.80 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:46:22



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

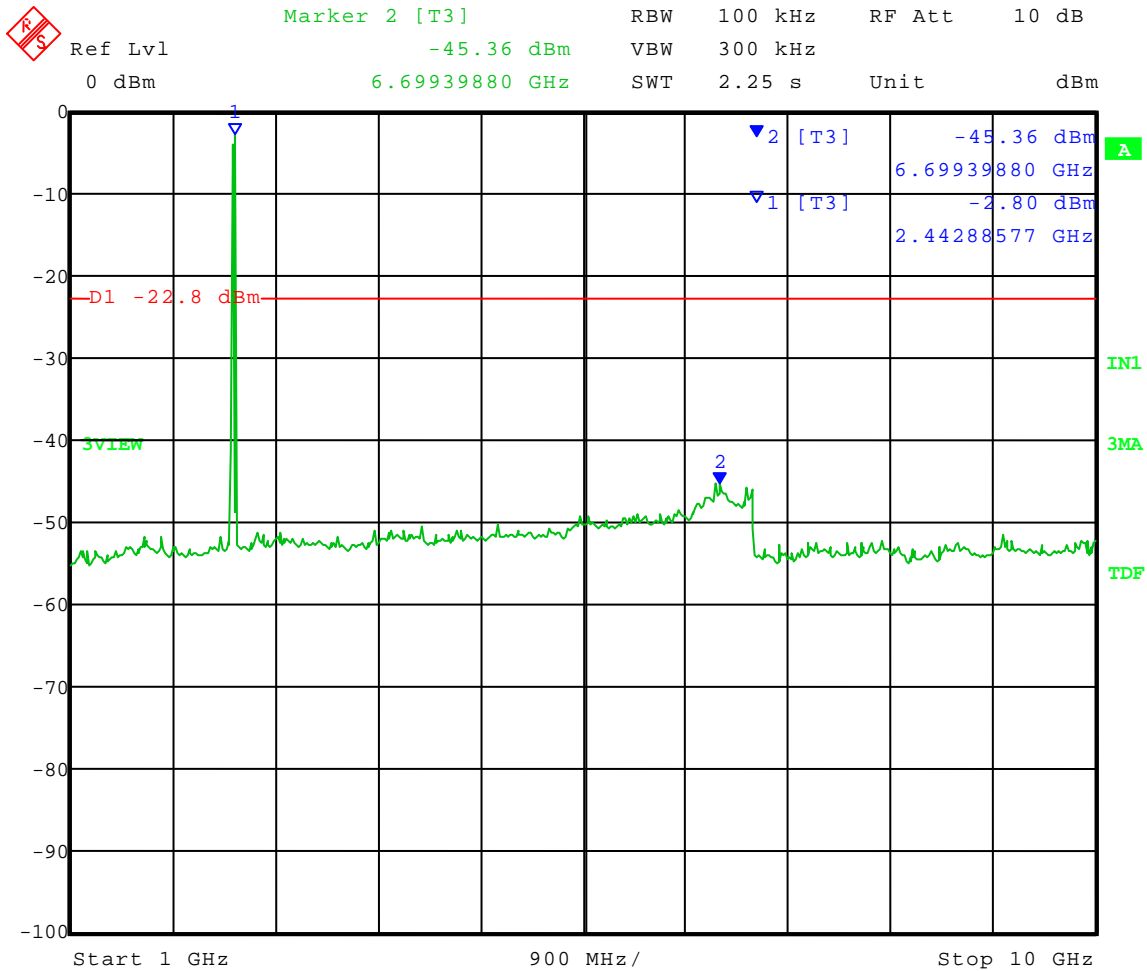
Appendix B – Measurement Data

Test Date: 09-21-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **Middle Channel** Transmit = 2.437 GHz
 802.11g

Frequency Range: 1 to 10 GHz
 Limit = -22.80 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:38:40



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

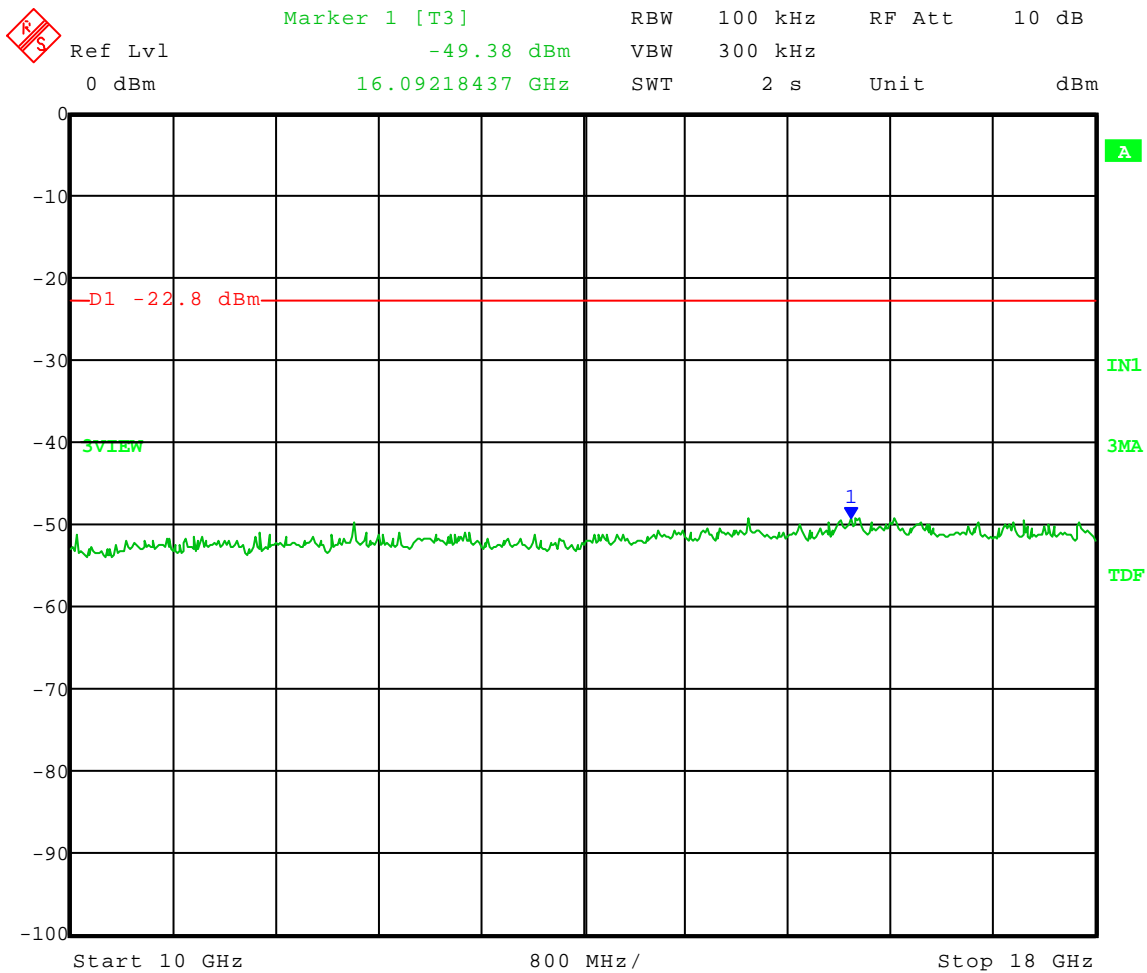
Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: Spurious Emissions - Conducted
Operator: Craig B

Comment: **Middle Channel** Transmit = 2.437 GHz
802.11g

Frequency Range: 10 to 18 GHz
Limit = -22.80 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:41:22



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

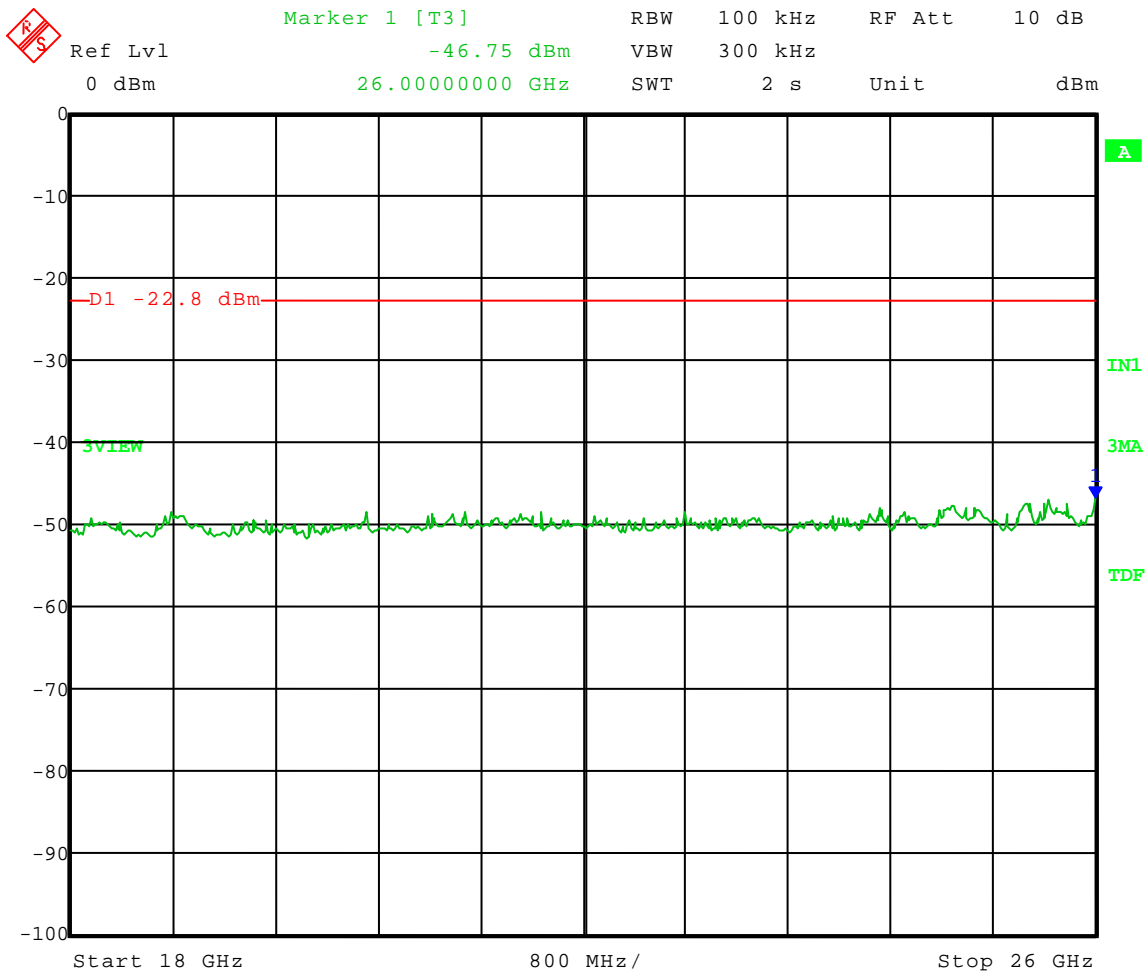
Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: Spurious Emissions - Conducted
Operator: Craig B

Comment: **Middle Channel** Transmit = 2.437 GHz
802.11g

Frequency Range: 18 to 26 GHz
Limit = -22.80 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:43:42



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

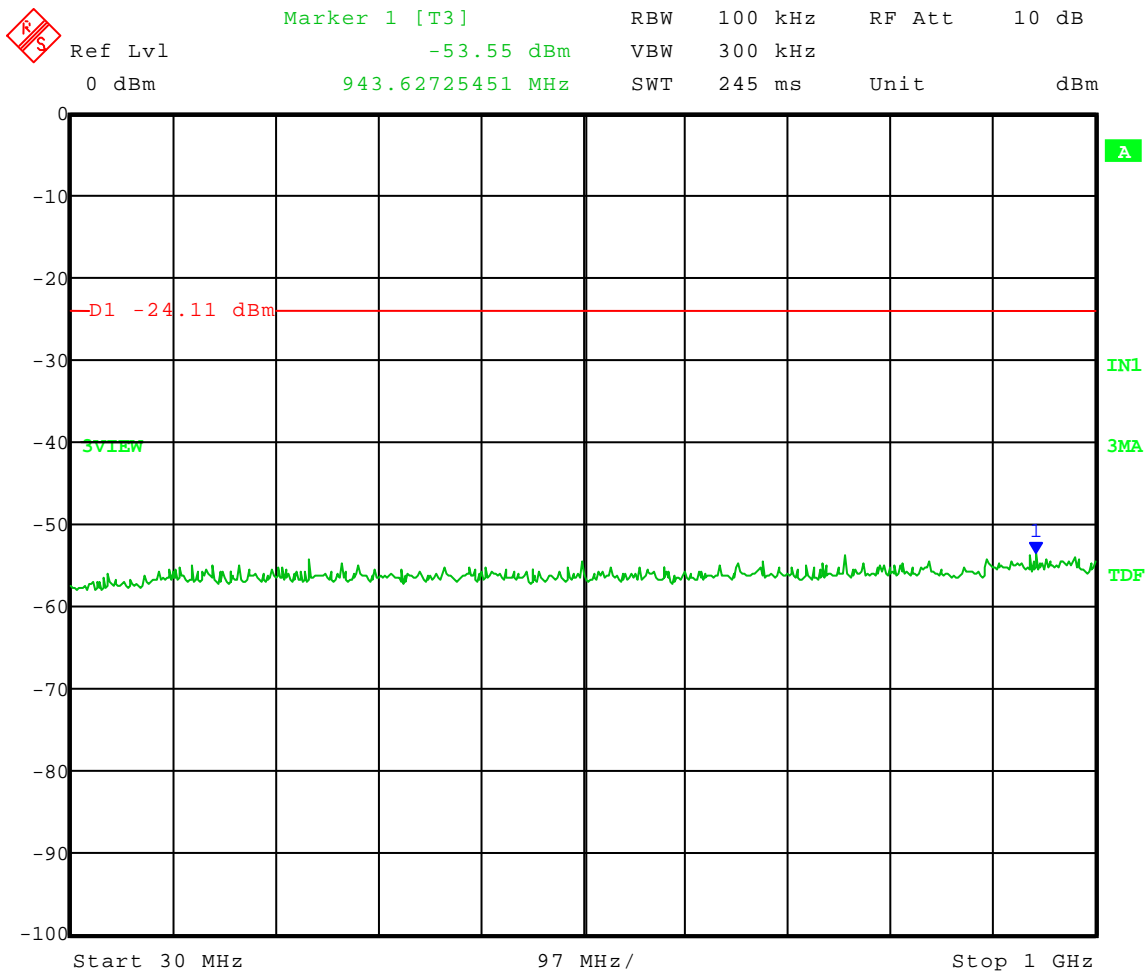
Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: Spurious Emissions - Conducted
Operator: Craig B

Comment: **High Channel** Transmit = 2.462 GHz
802.11g

Frequency Range: 30 to 1000 MHz
Limit = -24.11 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:57:41



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

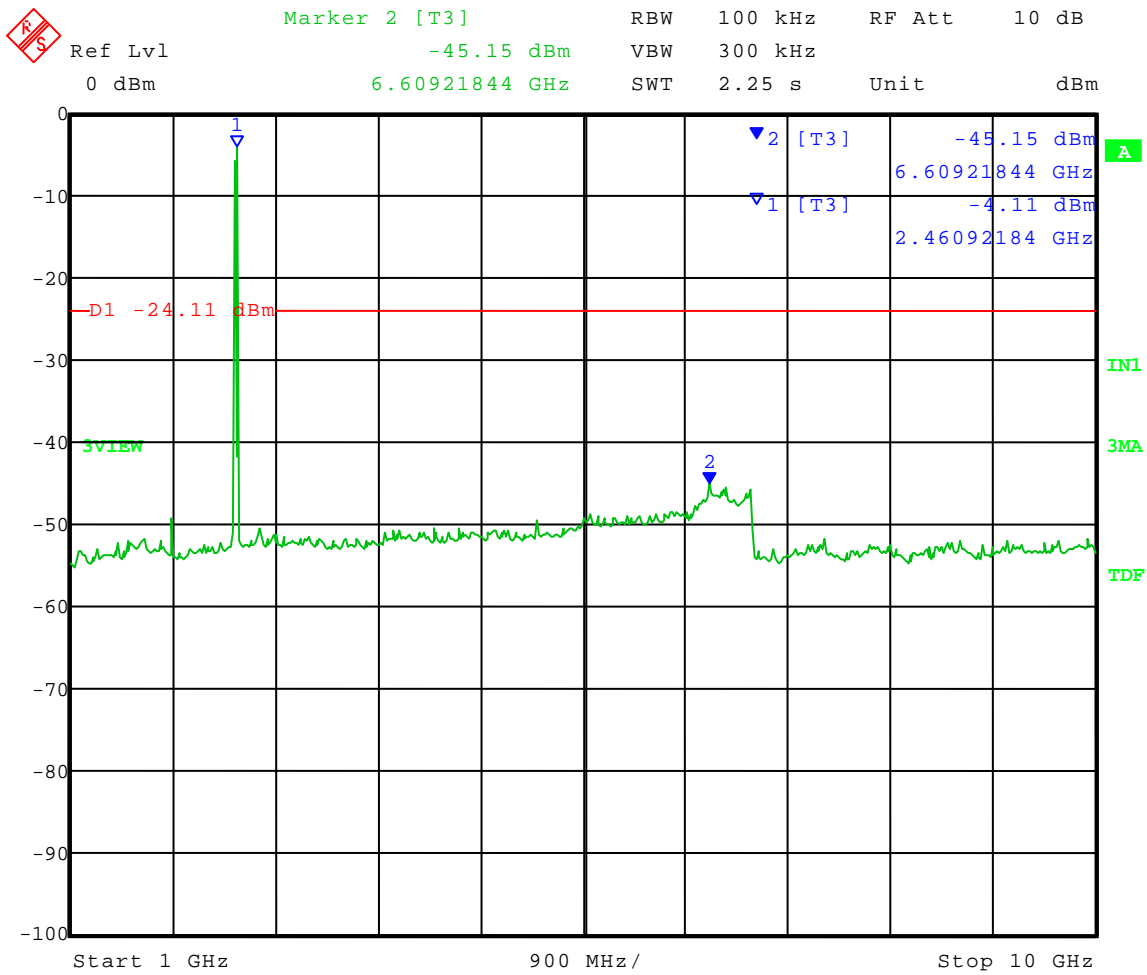
Appendix B – Measurement Data

Test Date: 09-21-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **High Channel** Transmit = 2.462 GHz
 802.11g

Frequency Range: 1 to 10 GHz
 Limit = -24.11 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:50:52



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

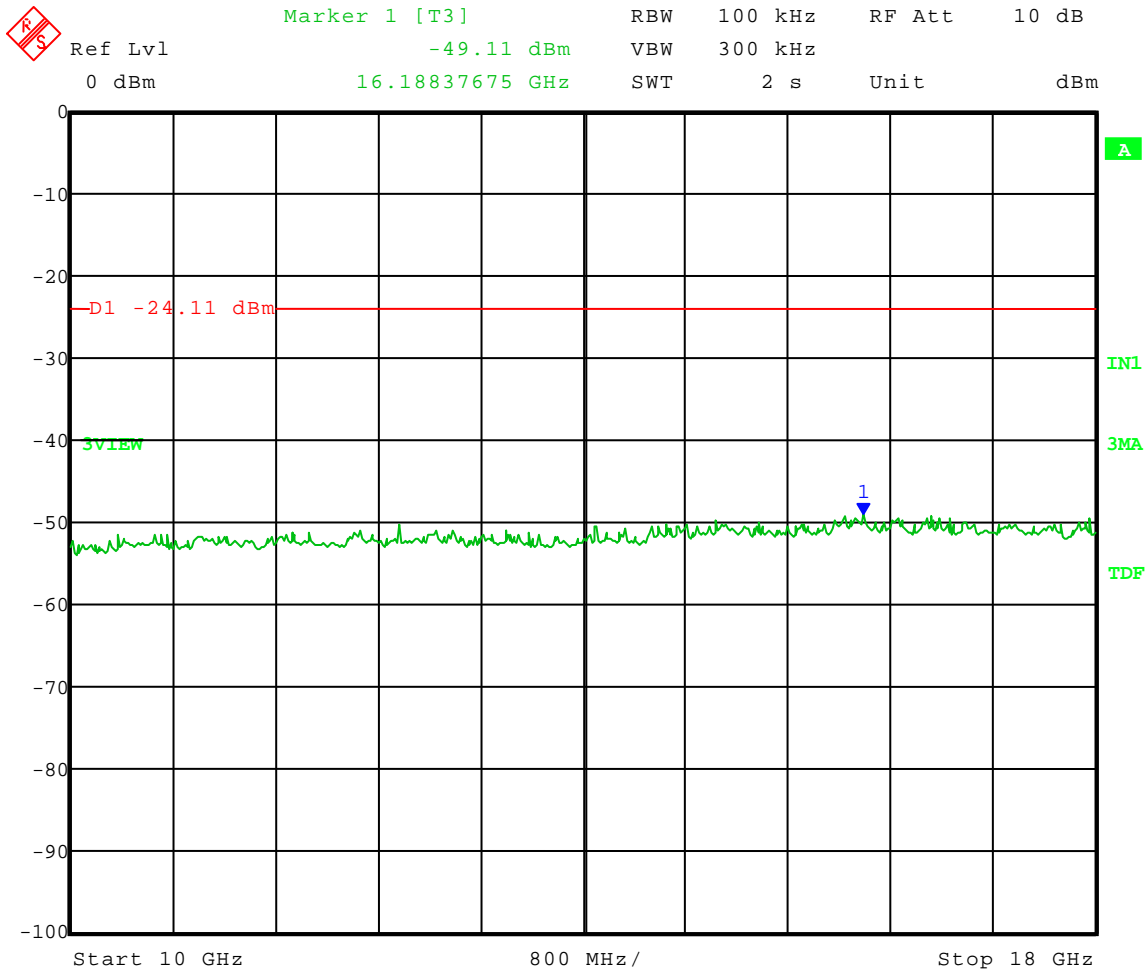
Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: Spurious Emissions - Conducted
Operator: Craig B

Comment: **High Channel** Transmit = 2.462 GHz
802.11g

Frequency Range: 10 to 18 GHz
Limit = -24.11 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:53:38



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

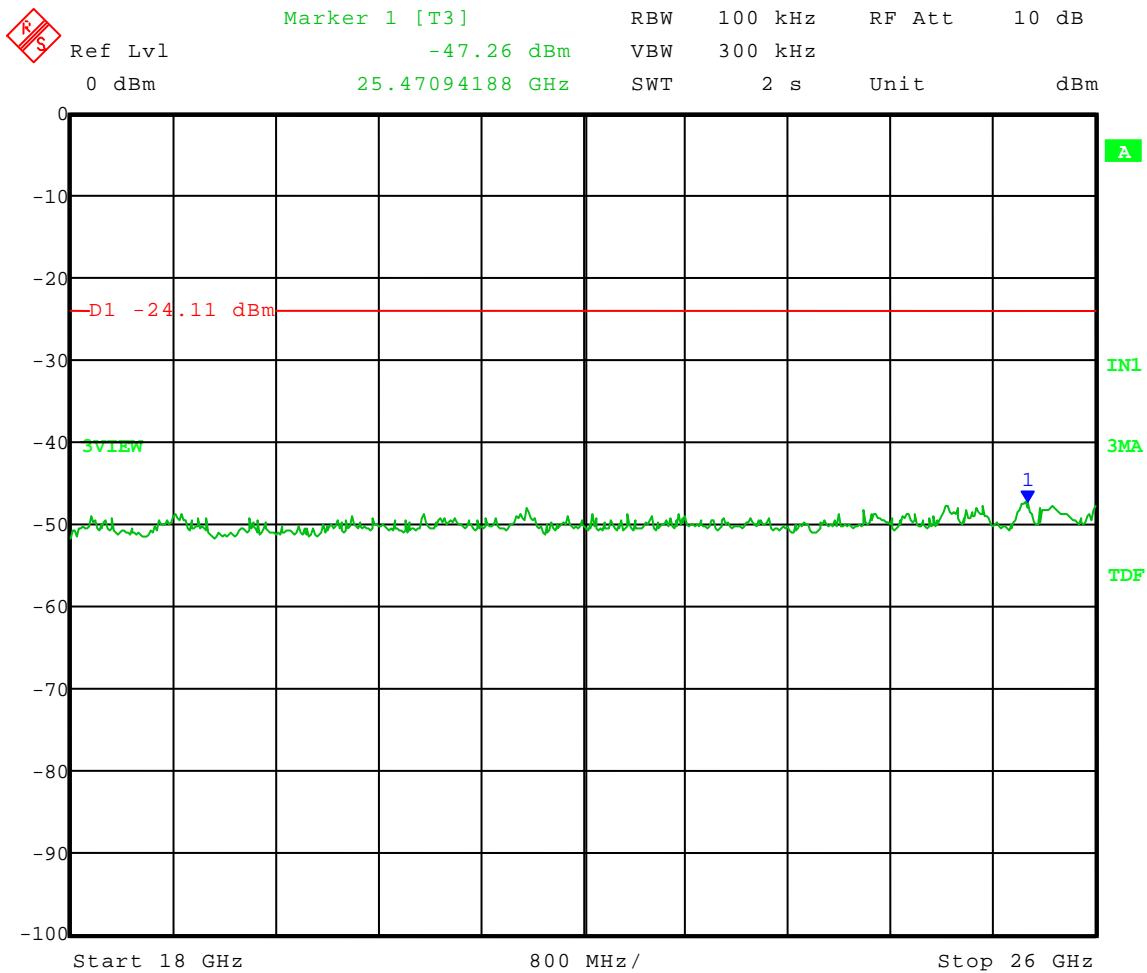
Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: Spurious Emissions - Conducted
Operator: Craig B

Comment: **High Channel** Transmit = 2.462 GHz
802.11g

Frequency Range: 18 to 26 GHz
Limit = -24.11 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 21.SEP.2011 08:55:57



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

B3.1 RF Conducted Spurious Emissions – 802.11b mode

Rule Part: FCC Part 15.247(d)

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

Limit: 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. (Device complies with Power Option 1).

Results: Compliant

Notes: The EUT was set to transmit at its maximum power, maximum data rate, and maximum duty cycle. A peak detector was used for this test.



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

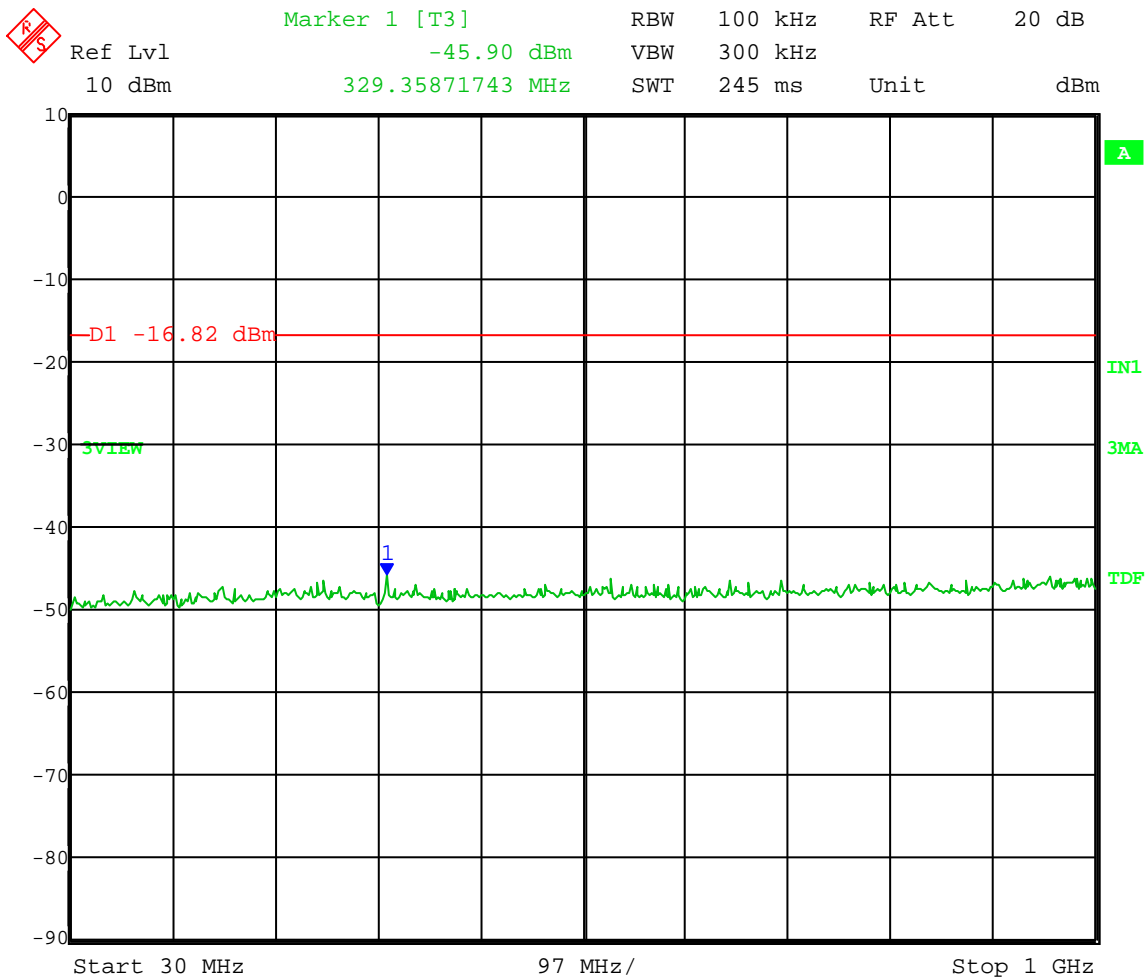
Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **Low Channel** Transmit = 2.412 GHz
 802.11b

Frequency Range: 30 to 1000 MHz
 Limit = -16.82 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 12:58:02



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

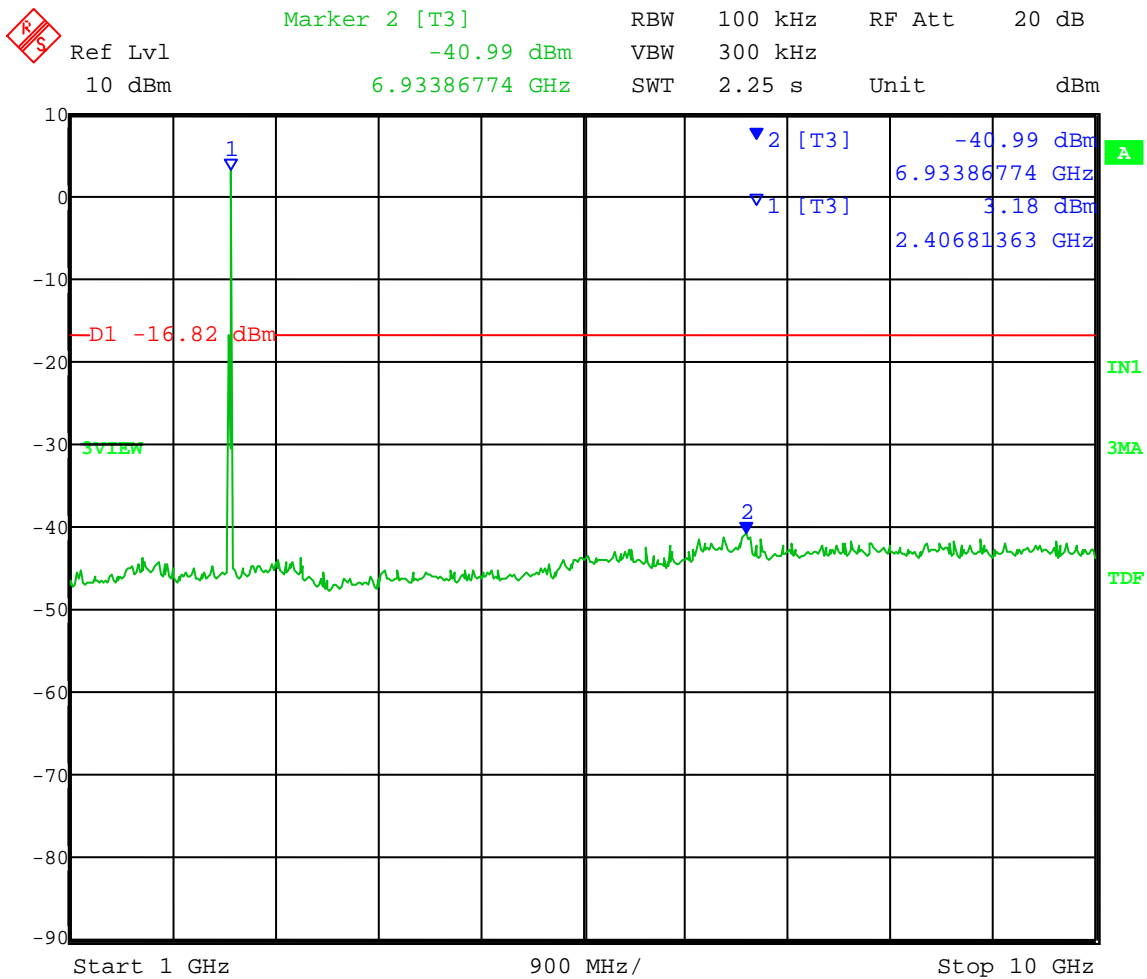
Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **Low Channel** Transmit = 2.412 GHz
 802.11b

Frequency Range: 1 to 10 GHz
 Limit = -16.82 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 12:12:53



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

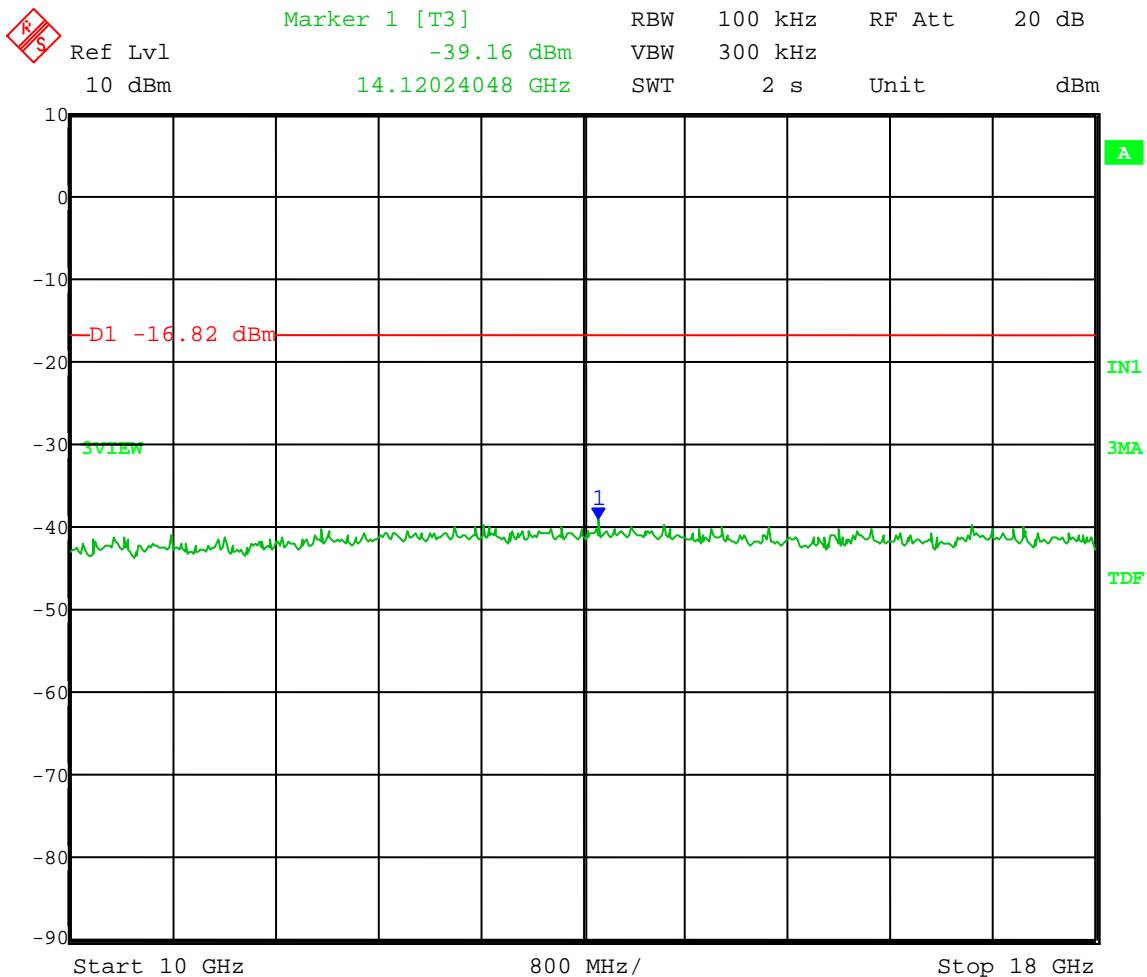
Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **Low Channel** Transmit = 2.412 GHz
 802.11b

Frequency Range: 10 to 18 GHz
 Limit = -16.82 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 12:54:04



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

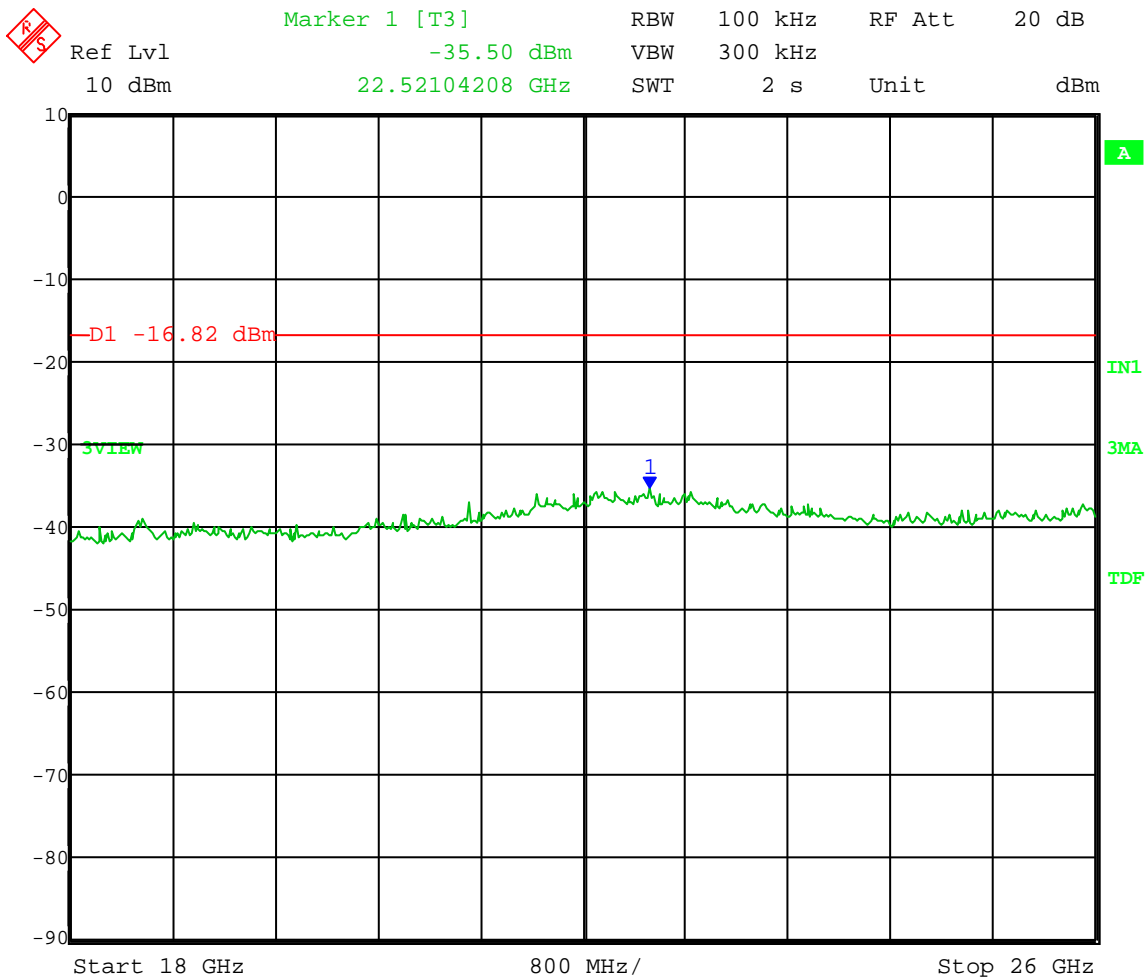
Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **Low Channel** Transmit = 2.412 GHz
 802.11b

Frequency Range: 18 to 26 GHz
 Limit = -16.82 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 12:56:25



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

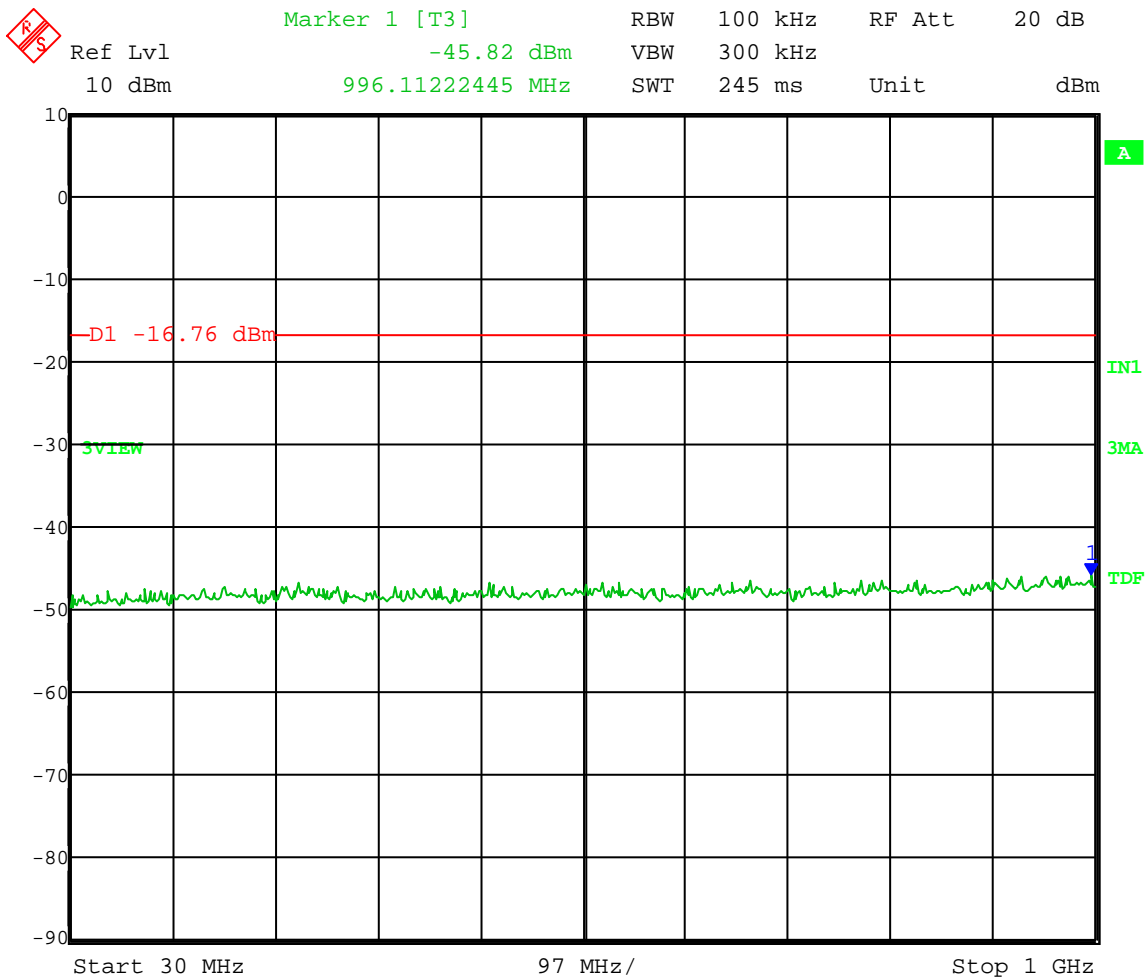
Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: Middle Channel Transmit = 2.437 GHz
 802.11b

Frequency Range: 30 to 1000 MHz
 Limit = -16.76 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 14:07:13



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

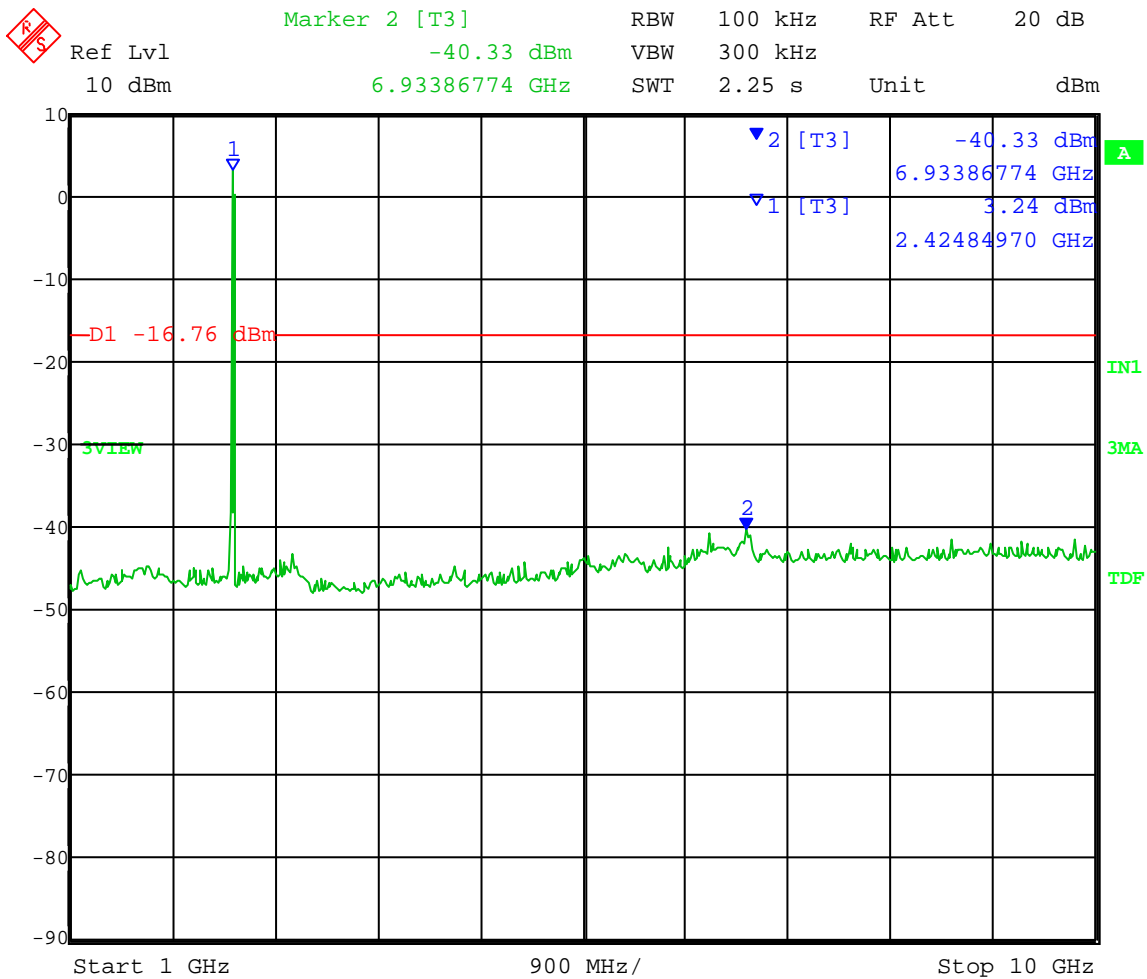
Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **Middle Channel** Transmit = 2.437 GHz
 802.11b

Frequency Range: 1 to 10 GHz
 Limit = -16.76 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 14:02:02



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

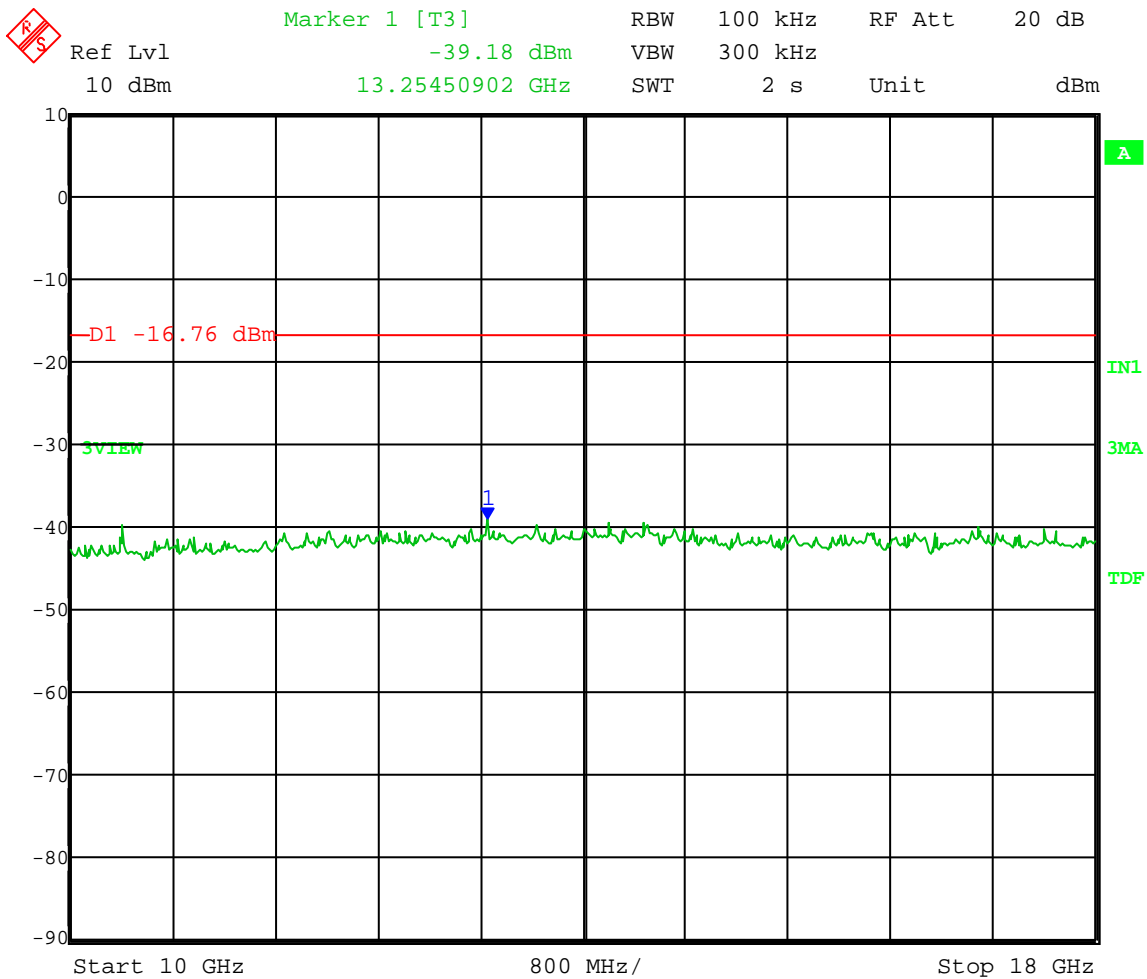
Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: Middle Channel Transmit = 2.437 GHz
 802.11b

Frequency Range: 10 to 18 GHz
 Limit = -16.76 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 14:03:48



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

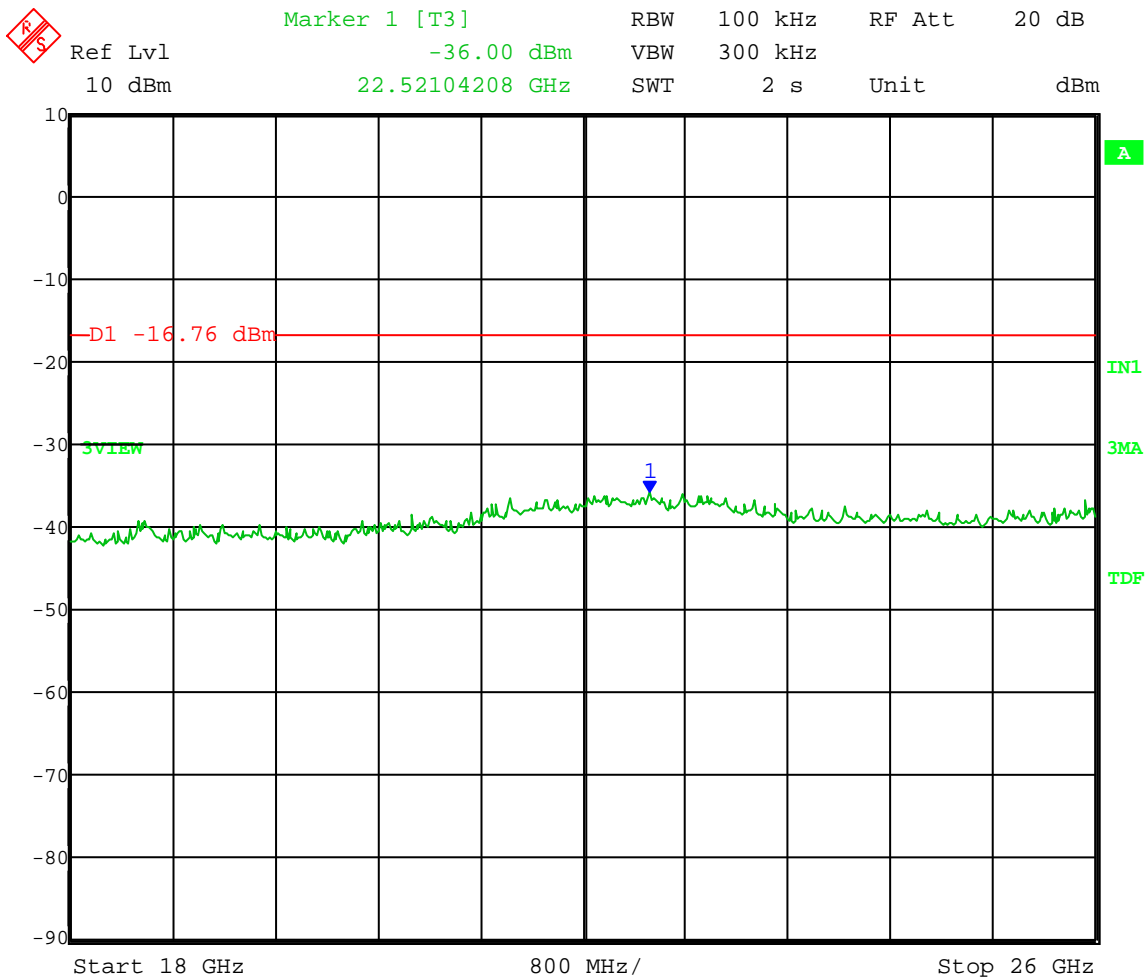
Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **Middle Channel** Transmit = 2.437 GHz
 802.11b

Frequency Range: 18 to 26 GHz
 Limit = -16.76 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 14:05:36



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

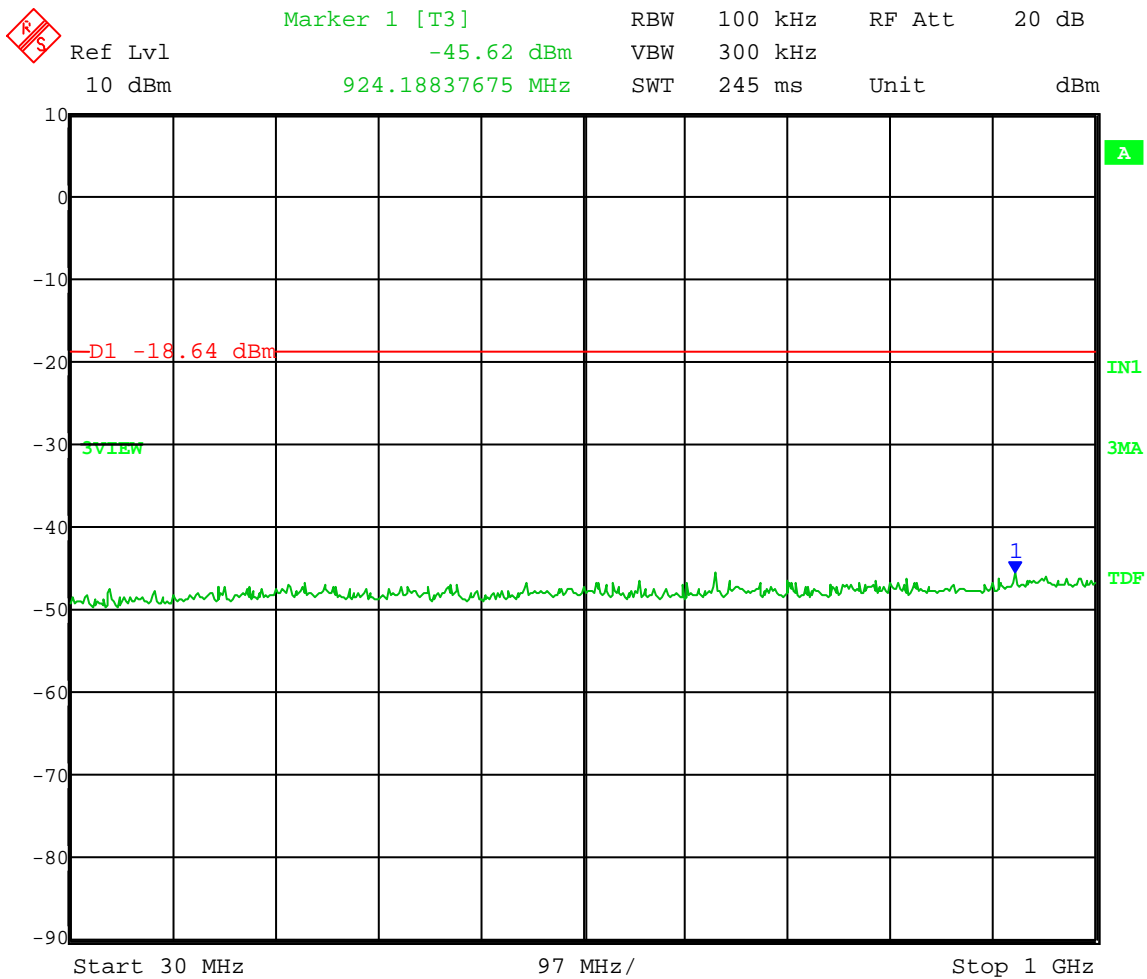
Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **High Channel** Transmit = 2.462 GHz
 802.11b

Frequency Range: 30 to 1000 MHz
 Limit = -18.64 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 13:57:48



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

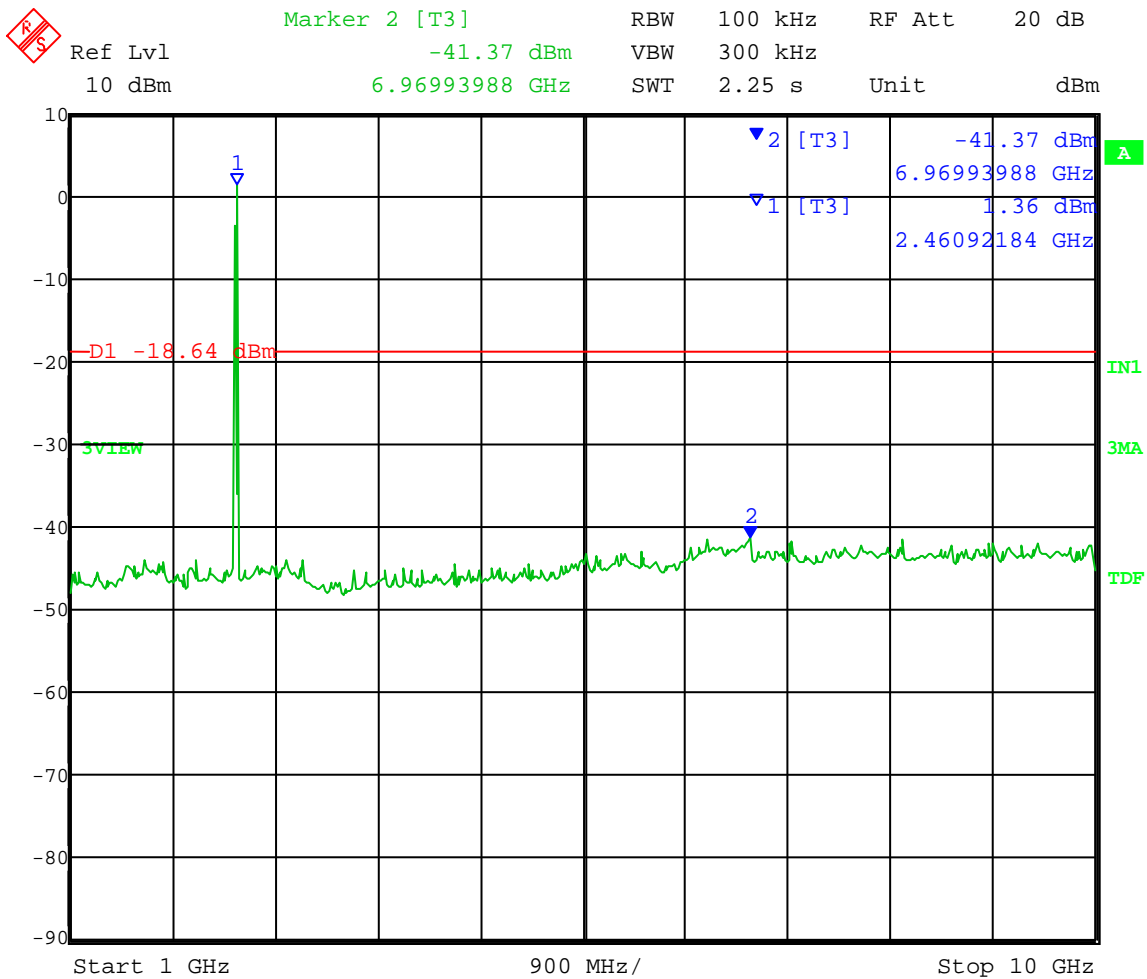
Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Spurious Emissions - Conducted
 Operator: Craig B

Comment: **High Channel** Transmit = 2.462 GHz
 802.11b

Frequency Range: 1 to 10 GHz
 Limit = -18.64 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 13:51:52



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

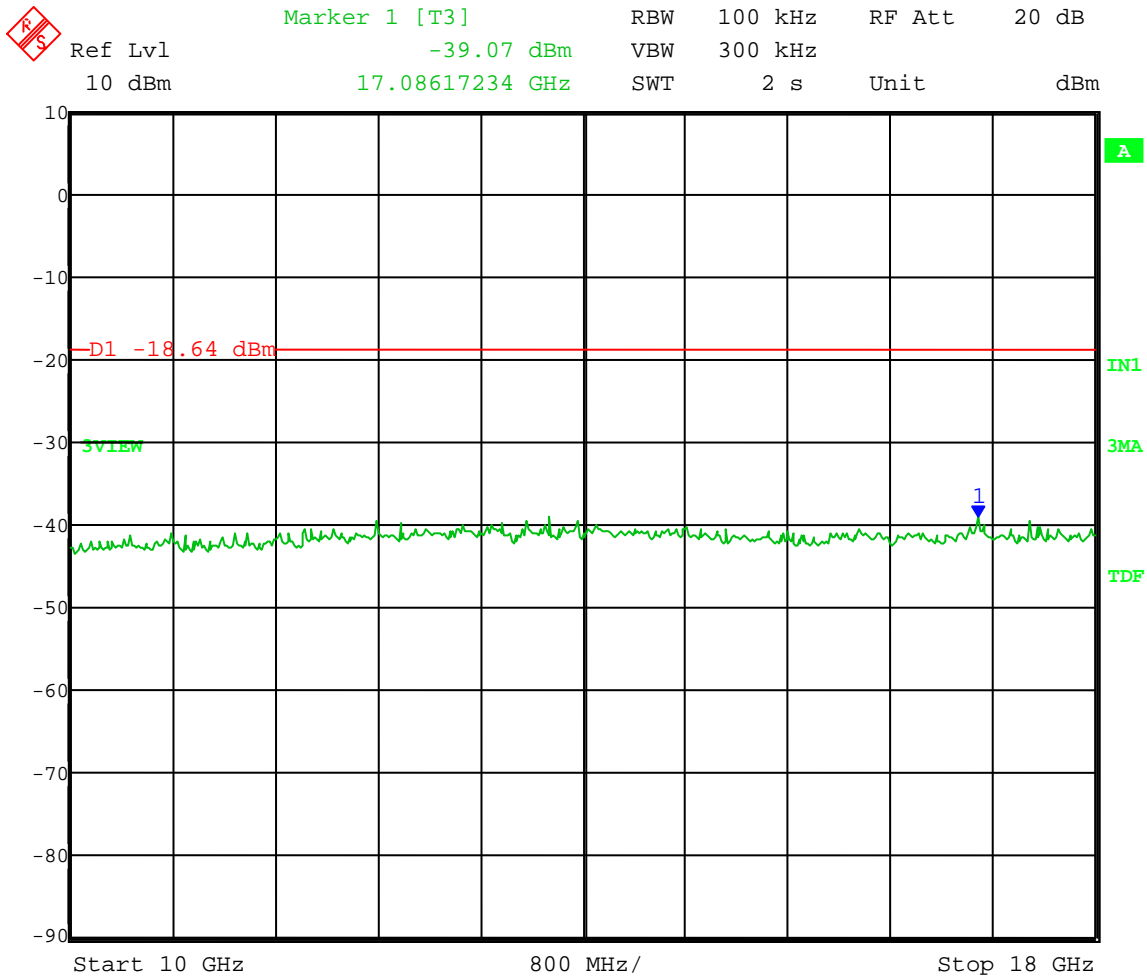
Appendix B – Measurement Data

Test Date: 12-12-2011
Company: Koss Corporation
EUT: CC05
Test: Spurious Emissions - Conducted
Operator: Craig B

Comment: **High Channel** Transmit = 2.462 GHz
802.11b

Frequency Range: 10 to 18 GHz
Limit = -18.64 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 13:54:00



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

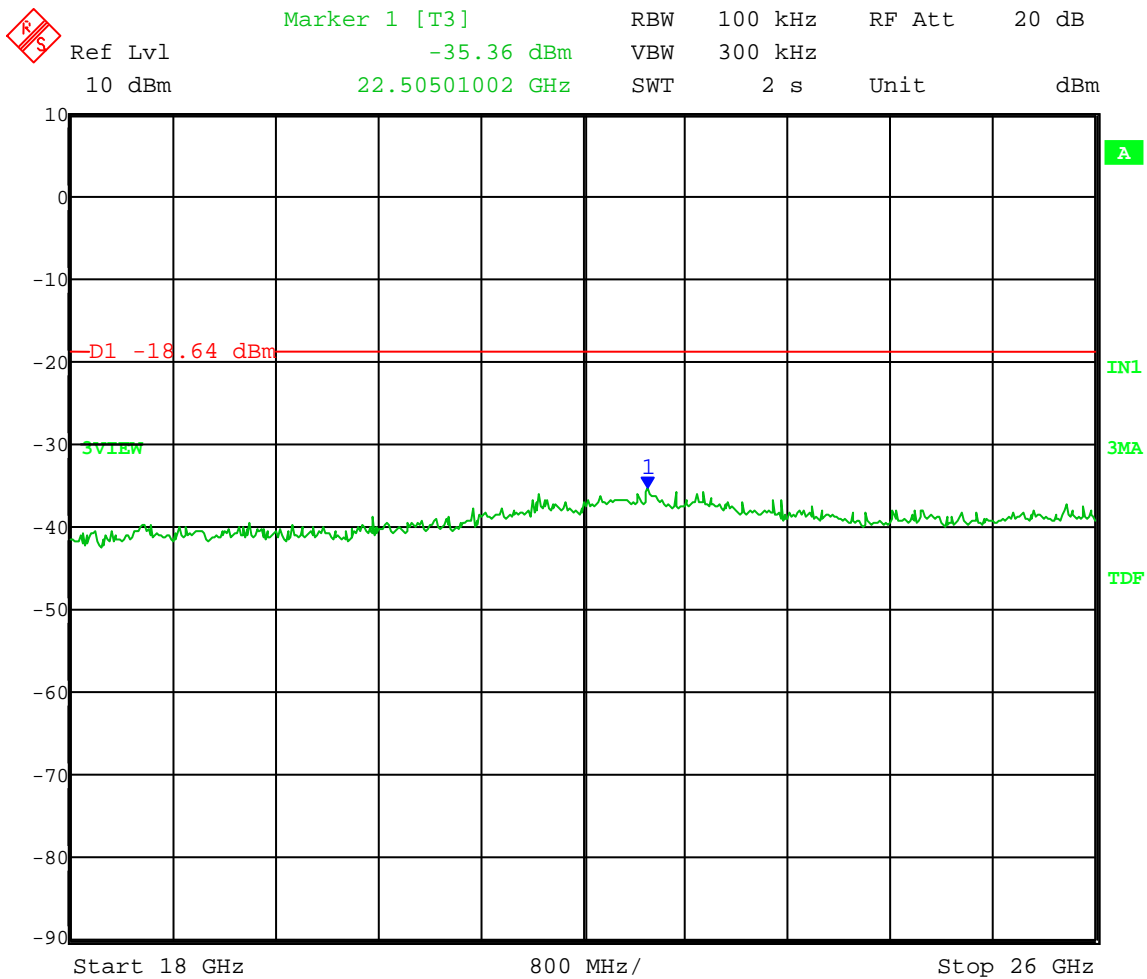
Appendix B – Measurement Data

Test Date: 12-12-2011
Company: Koss Corporation
EUT: CC05
Test: Spurious Emissions - Conducted
Operator: Craig B

Comment: High Channel Transmit = 2.462 GHz
802.11b

Frequency Range: 18 to 26 GHz
Limit = -18.64 dBm

All Spurious Emissions at Least 20 dB below Peak Level of In Band Frequency



Date: 12.DEC.2011 13:55:57



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

B4.0 Band Edge Emission – 802.11g mode

Rule Part: FCC Part 15.247(d)

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

Limit: 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. (Device complies with Power Option 1).

Results: Compliant

Notes: The EUT was set to transmit at its maximum power, maximum data rate, and maximum duty cycle.



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

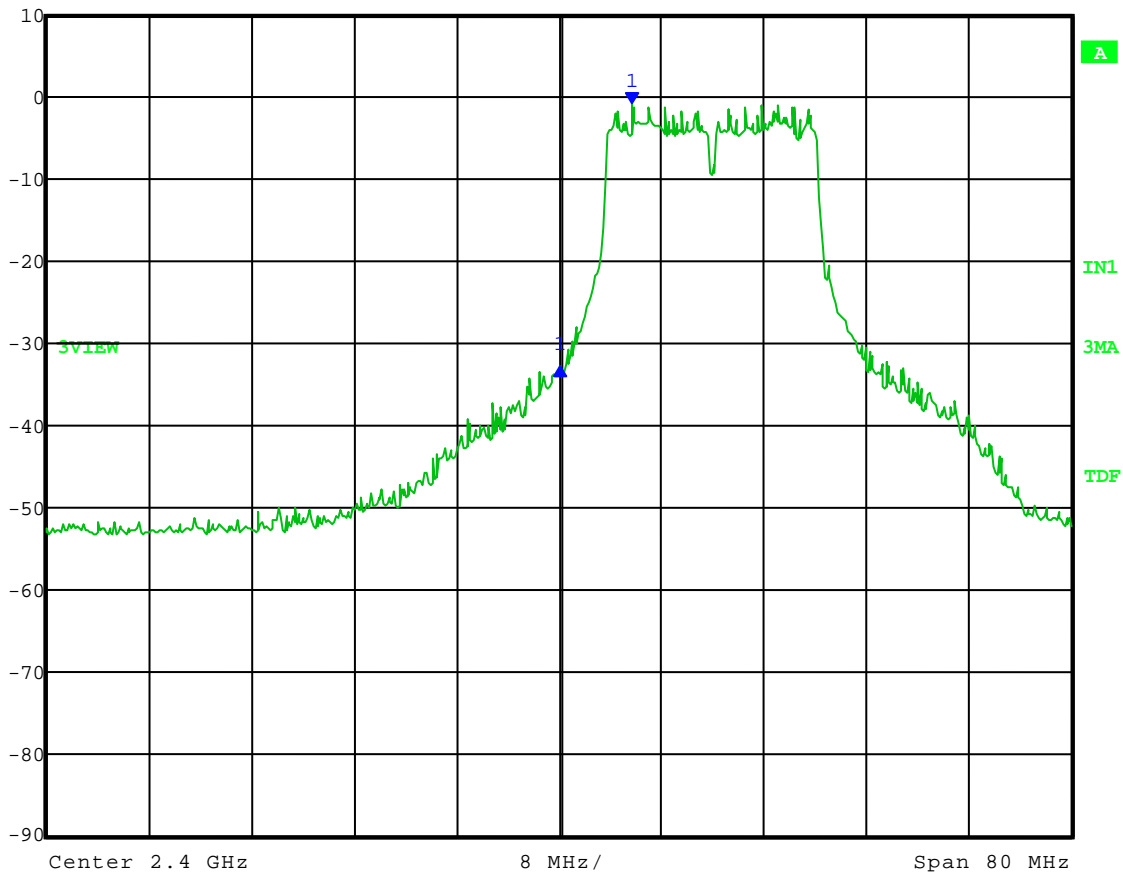
Appendix B – Measurement Data

Test Date: 09-21-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Low Band-Edge Compliance - Conducted
 Operator: Craig B

Comment: **Low Channel**: Frequency – 2.412 GHz
 802.11g

Band-Edge Frequency = 2.4 GHz
 Band-Edge > 20 dB Below Peak In-Band Emission

	Max/Ref Lvl	Delta 1 [T3]	RBW	100 kHz	RF Att	10 dB
	10 dBm	-31.85 dB	VBW	300 kHz		
	0 dBm	-5.61122244 MHz	SWT	60 s	Unit	dBm



Date: 21.SEP.2011 09:04:47



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

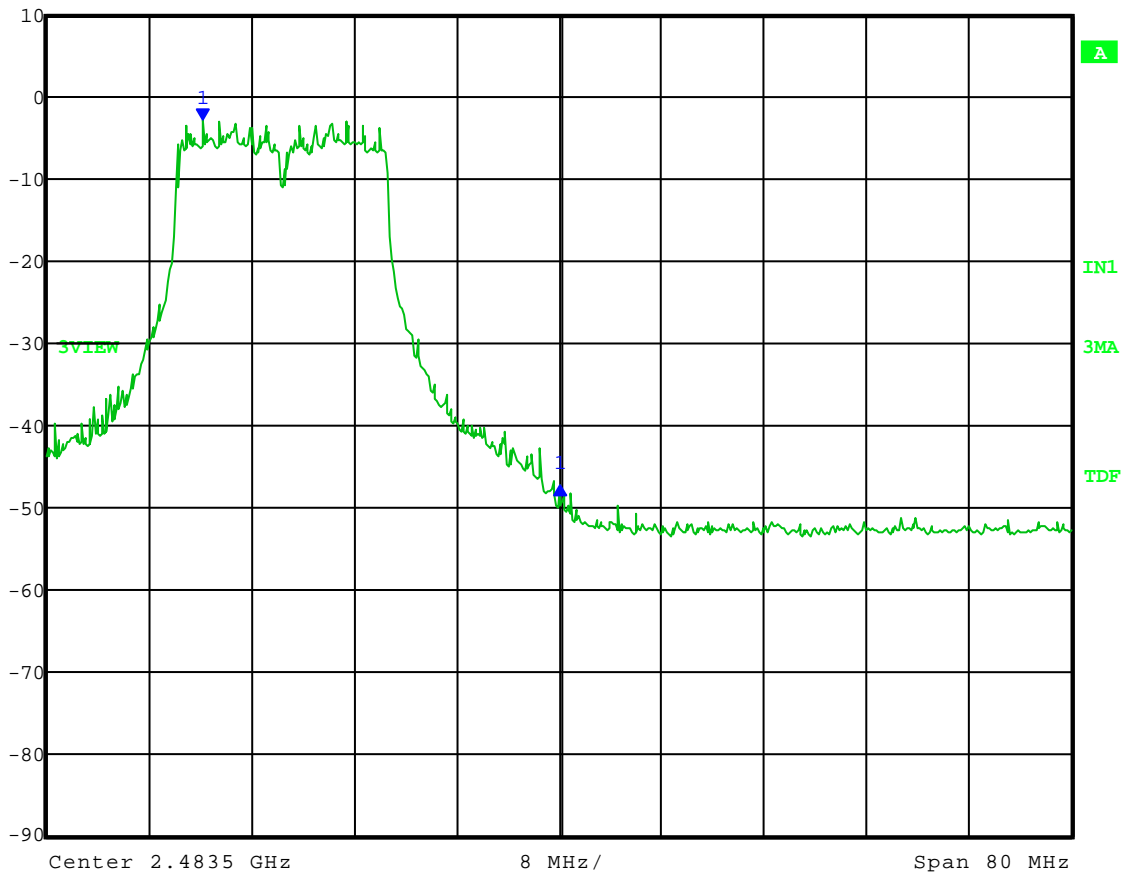
Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: Upper Band-Edge Compliance - Conducted
Operator: Craig B

Comment: **High Channel**: Frequency – 2.462 GHz
802.11g

Band-Edge Frequency = 2.4835 GHz
Band-Edge > 20 dB Below Peak In-Band Emission

	Max/Ref Lvl	Delta 1 [T3]	RBW	100 kHz	RF Att	10 dB
	10 dBm	-44.62 dB	VBW	300 kHz		
	0 dBm	27.89579158 MHz	SWT	60 s	Unit	dBm



Date: 21.SEP.2011 09:01:41



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

B4.1 Band Edge Emission – 802.11b mode

Rule Part: FCC Part 15.247(d)

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

Limit: 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. (Device complies with Power Option 1).

Results: Compliant

Notes: The EUT was set to transmit at its maximum power, maximum data rate, and maximum duty cycle.



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

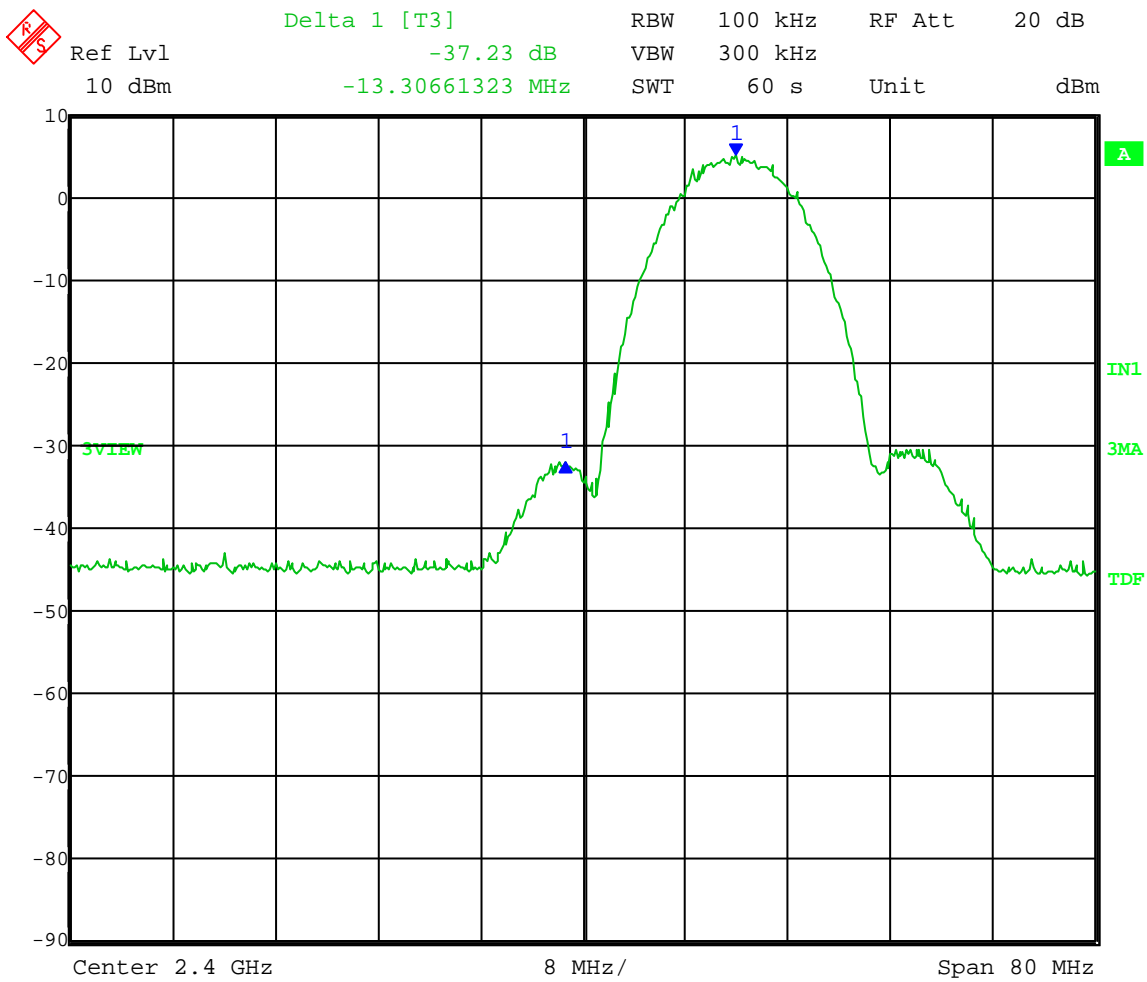
166 South Carter, Genoa City, WI 53128

Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Low Band-Edge Compliance - Conducted
 Operator: Craig B

Comment: **Low Channel**: Frequency – 2.412 GHz
 802.11b

Band-Edge Frequency = 2.4 GHz
 Band-Edge > 20 dB Below Peak In-Band Emission



Date: 12.DEC.2011 13:05:37



166 South Carter, Genoa City, WI 53128

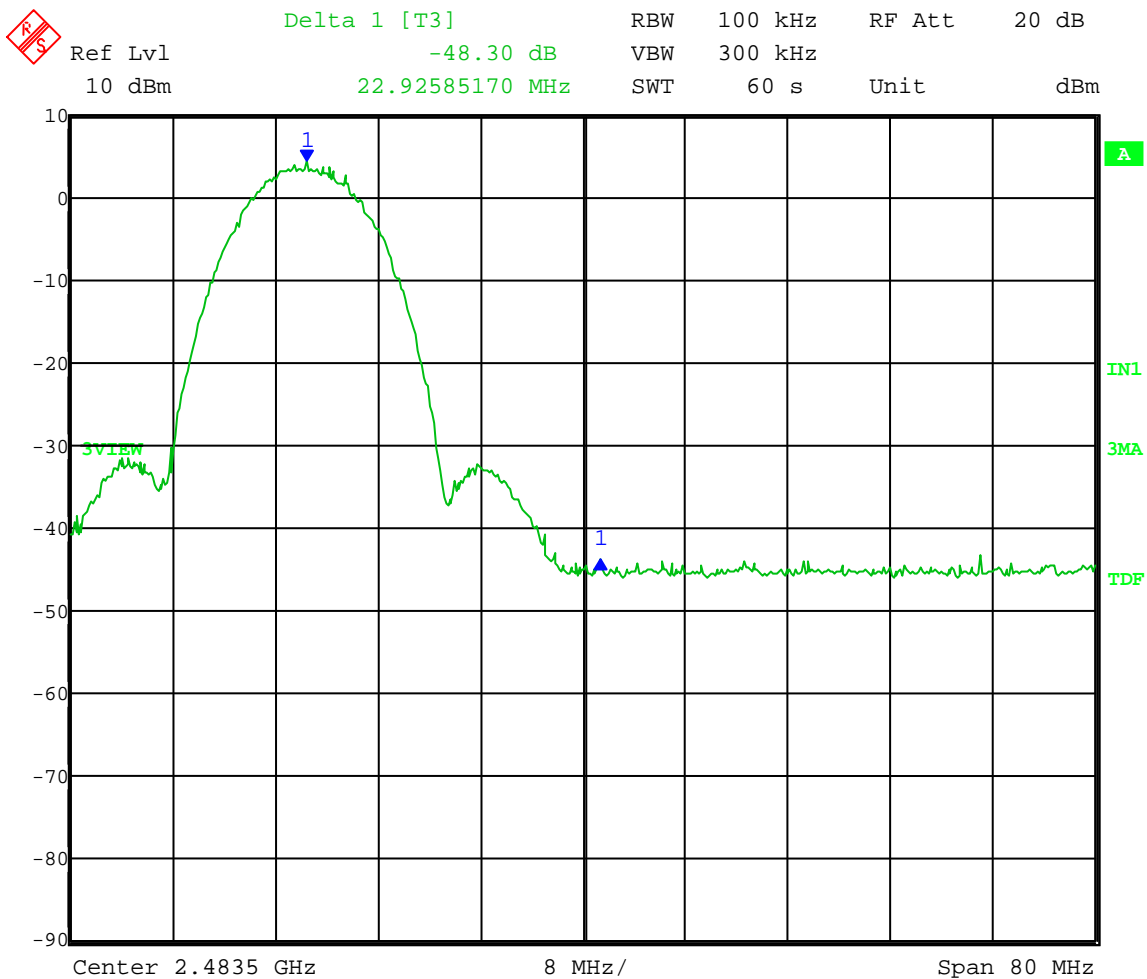
Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

Test Date: 12-12-2011
Company: Koss Corporation
EUT: CC05
Test: Upper Band-Edge Compliance - Conducted
Operator: Craig B

Comment: **High Channel:** Frequency – 2.462 GHz
802.11b

Band-Edge Frequency = 2.4835 GHz
Band-Edge > 20 dB Below Peak In-Band Emission



Date: 12.DEC.2011 13:49:26



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

B4.2 Radiated Upper Band Edge Emission

Rule Part: FCC Part 15.247(d) and FCC Part 15.205

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005), FCC Publication KDB 558074

Limit: FCC Part 15.209

Results: Compliant

Notes: The upper band-edge coincides with a restricted band. Compliance was determined by measuring the field strength of the upper channel emission at the band edge.

The EUT was set to transmit at its maximum power and maximum data rate. Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz. Since the EUT is not able to transmit continuously, compliance with the Average limits are shown by applying a duty cycle correction factor to a peak detector measurement.

Tested in 802.11g mode (worst-case).



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

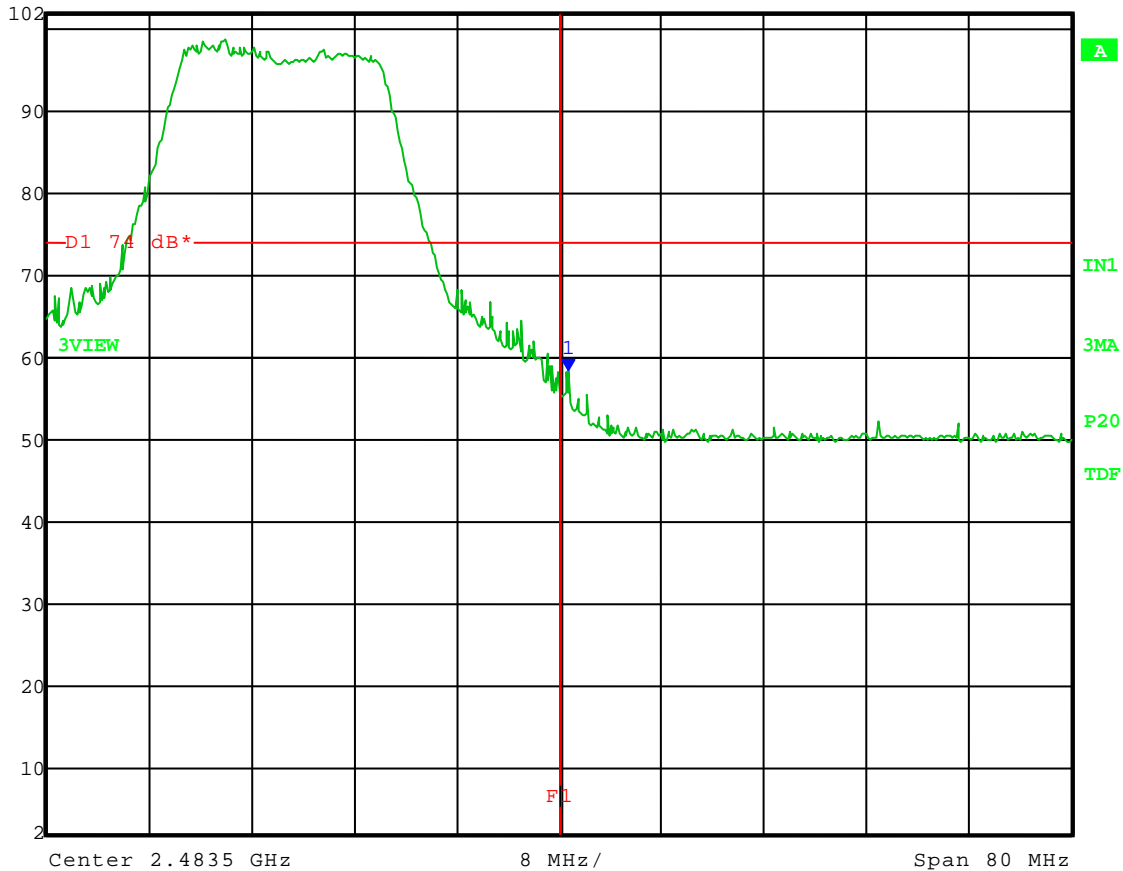
Appendix B – Measurement Data

Test Date: 09-19-2011
Company: Koss Corporation
EUT: CC05
Test: Upper Band-Edge Radiated
Operator: Craig B
Comment: **High Channel**: Frequency – 2.462 GHz Vertical (worst-case)
Band-Edge frequency: 2.4835 GHz
Peak limit at band edge: 74 dBμV/m at 3 meters.
Average limit at band edge: 54 dBμV/m at 3 meters.

Measured **Peak** level: 58.30 dBμV/m **Margin: 15.7 dB**

Average level: Peak – duty cycle correction factor = 58.30 – 22.2 = 36.10 dBμV/m **Margin: 17.90 dB**

	Max/Ref Lvl	Marker 1 [T3]	RBW	1 MHz	RF Att	0 dB
	102 dB*	58.30 dBμV/m	VBW	3 MHz		
	72 dB*	2.48422144 GHz	SWT	60 s	Unit	dBμV/m



Date: 19.SEP.2011 09:50:46



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

B5.0 Peak Power Spectral Density – 802.11g mode

Rule Part: FCC Part 15.247(e)

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

Limit: +8 dBm/3kHz

Results: Compliant

Sample Equations: Sweep time = (SPAN / 3 kHz)
= (1.5 MHz / 3 kHz)
= 500 seconds

Notes: The EUT was set to transmit at its maximum power, maximum data rate, and maximum duty cycle. PSD Option 1 was used for this test.



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

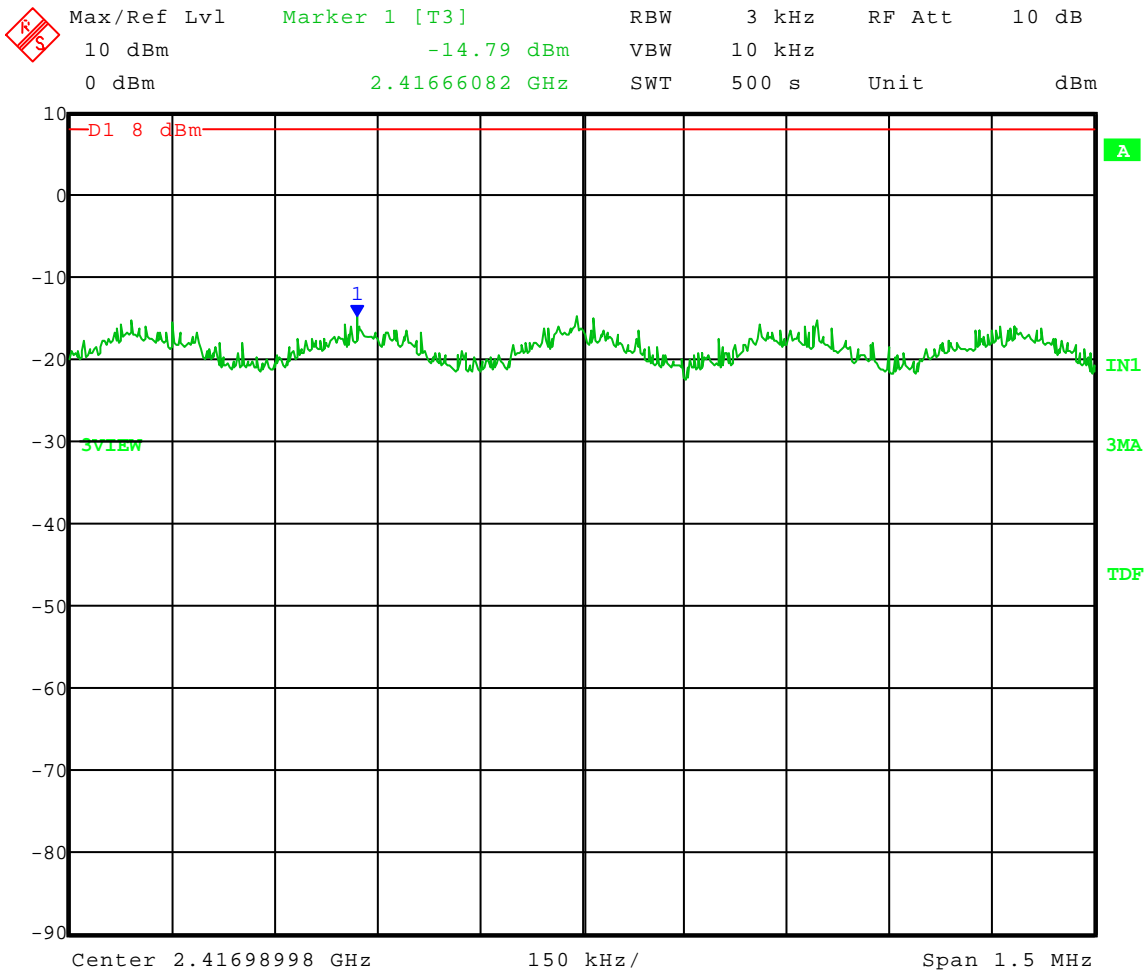
Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: Peak Power Spectral Density - Conducted
Operator: Craig B

Comment: **Low Channel**: Frequency – 2.412 GHz
802.11g

Limit: 8 dBm

Power in 3 kHz Bandwidth: **-14.79 dBm**



Date: 21.SEP.2011 13:03:01



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

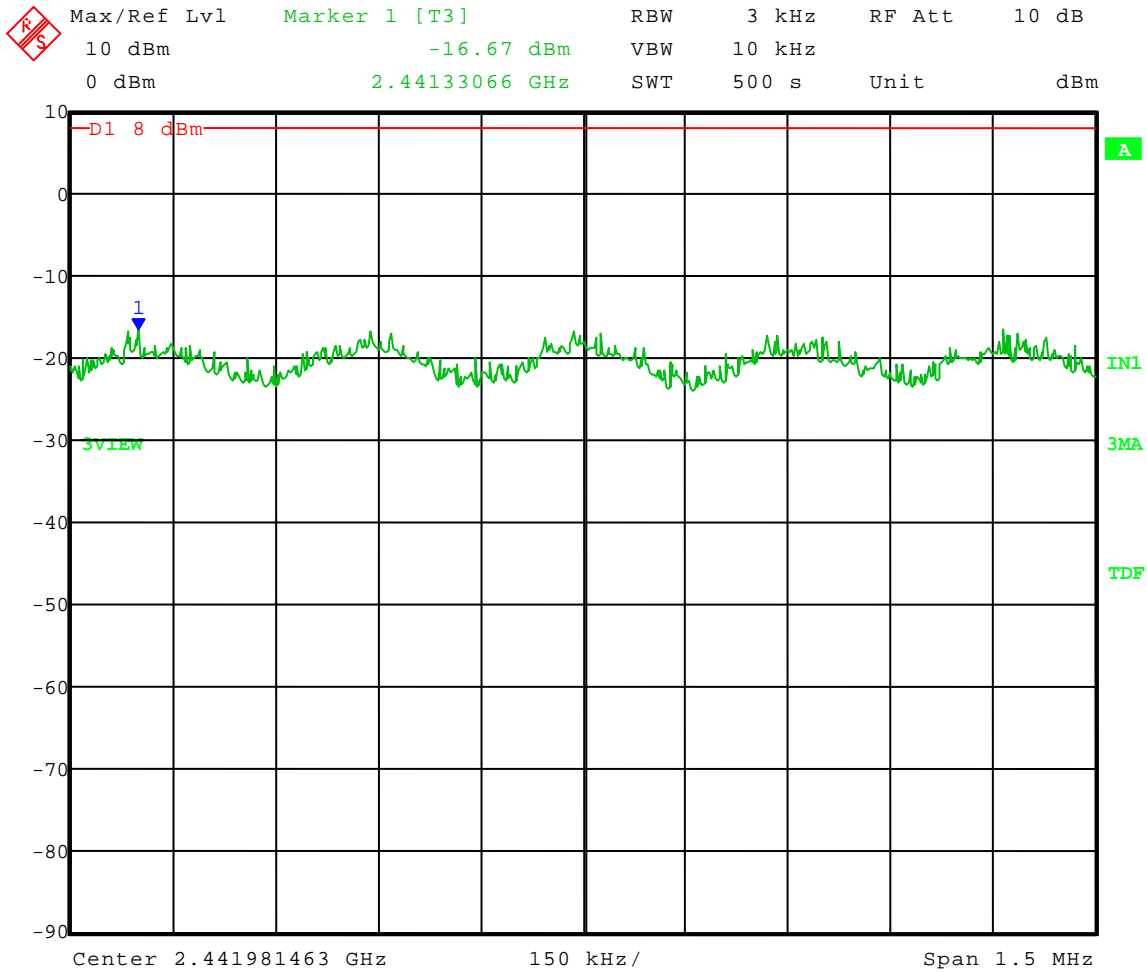
Appendix B – Measurement Data

Test Date: 09-21-2011
Company: Koss Corporation
EUT: CC05
Test: Peak Power Spectral Density - Conducted
Operator: Craig B

Comment: **Middle Channel:** Frequency – 2.437 GHz
802.11g

Limit: 8 dBm

Power in 3 kHz Bandwidth: **-16.67 dBm**



Date: 21.SEP.2011 13:19:34



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

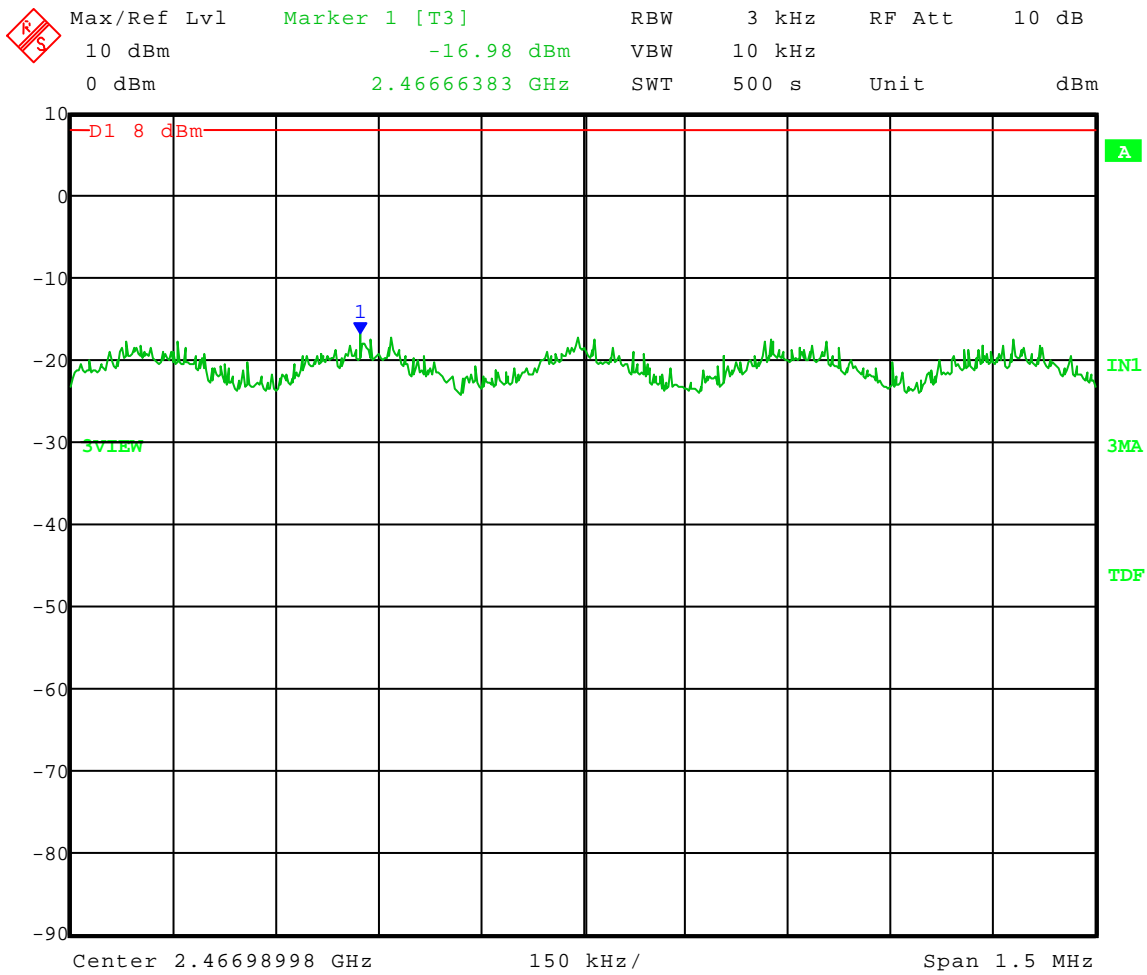
Appendix B – Measurement Data

Test Date: 09-21-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig B

Comment: **High Channel**: Frequency – 2.462 GHz
 802.11g

Limit: 8 dBm

Power in 3 kHz Bandwidth: **-16.98 dBm**



Date: 21.SEP.2011 13:54:44



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

B5.1 Peak Power Spectral Density – 802.11b mode

Rule Part: FCC Part 15.247(e)

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005)

Limit: +8 dBm/3kHz

Results: Compliant

Sample Equations: Sweep time = (SPAN / 3 kHz)
= (1.5 MHz / 3 kHz)
= 500 seconds

Notes: The EUT was set to transmit at its maximum power, maximum data rate, and maximum duty cycle. PSD Option 1 was used for this test.



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

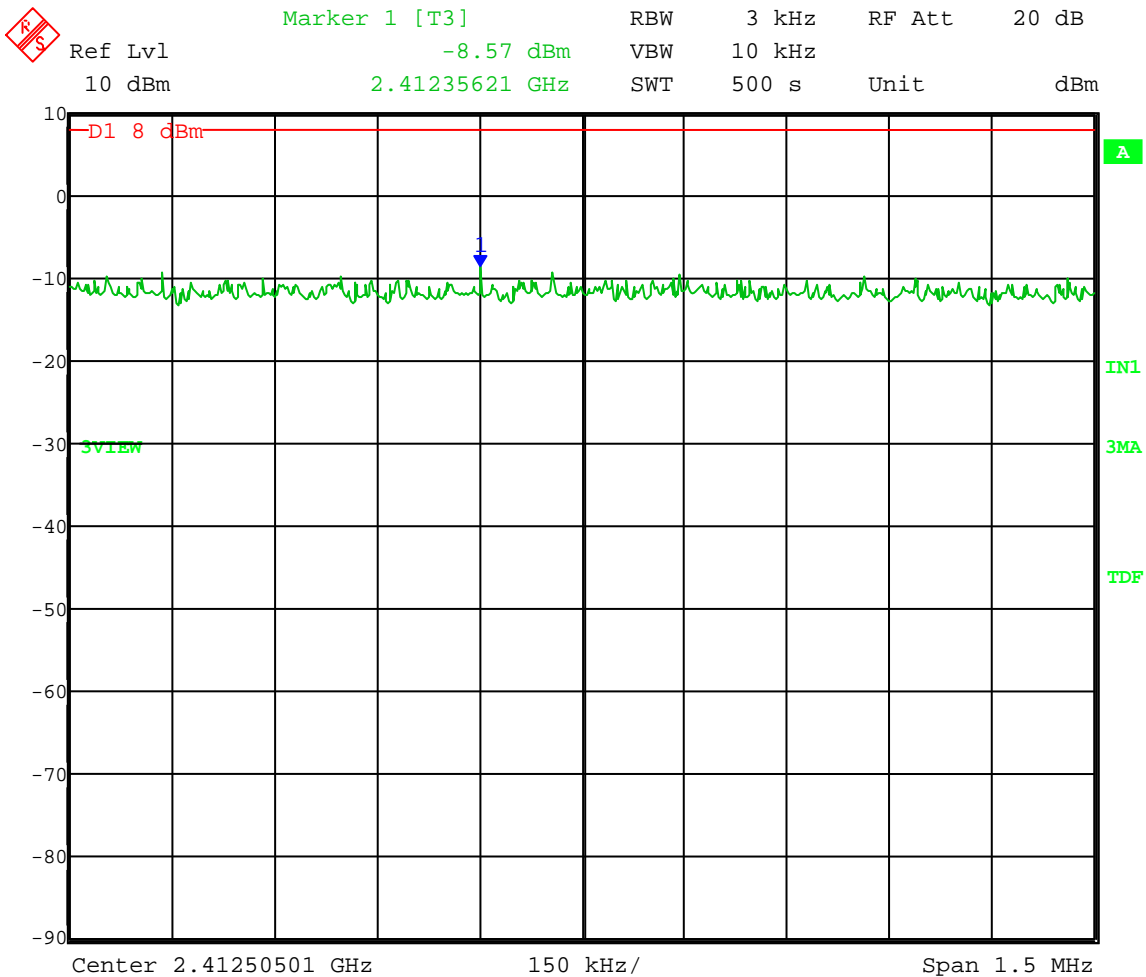
Appendix B – Measurement Data

Test Date: 12-12-2011
Company: Koss Corporation
EUT: CC05
Test: Peak Power Spectral Density - Conducted
Operator: Craig B

Comment: **Low Channel**: Frequency – 2.412 GHz
802.11b

Limit: 8 dBm

3 kHz Bandwidth: -8.57 dBm



Date: 12.DEC.2011 13:17:14



Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

166 South Carter, Genoa City, WI 53128

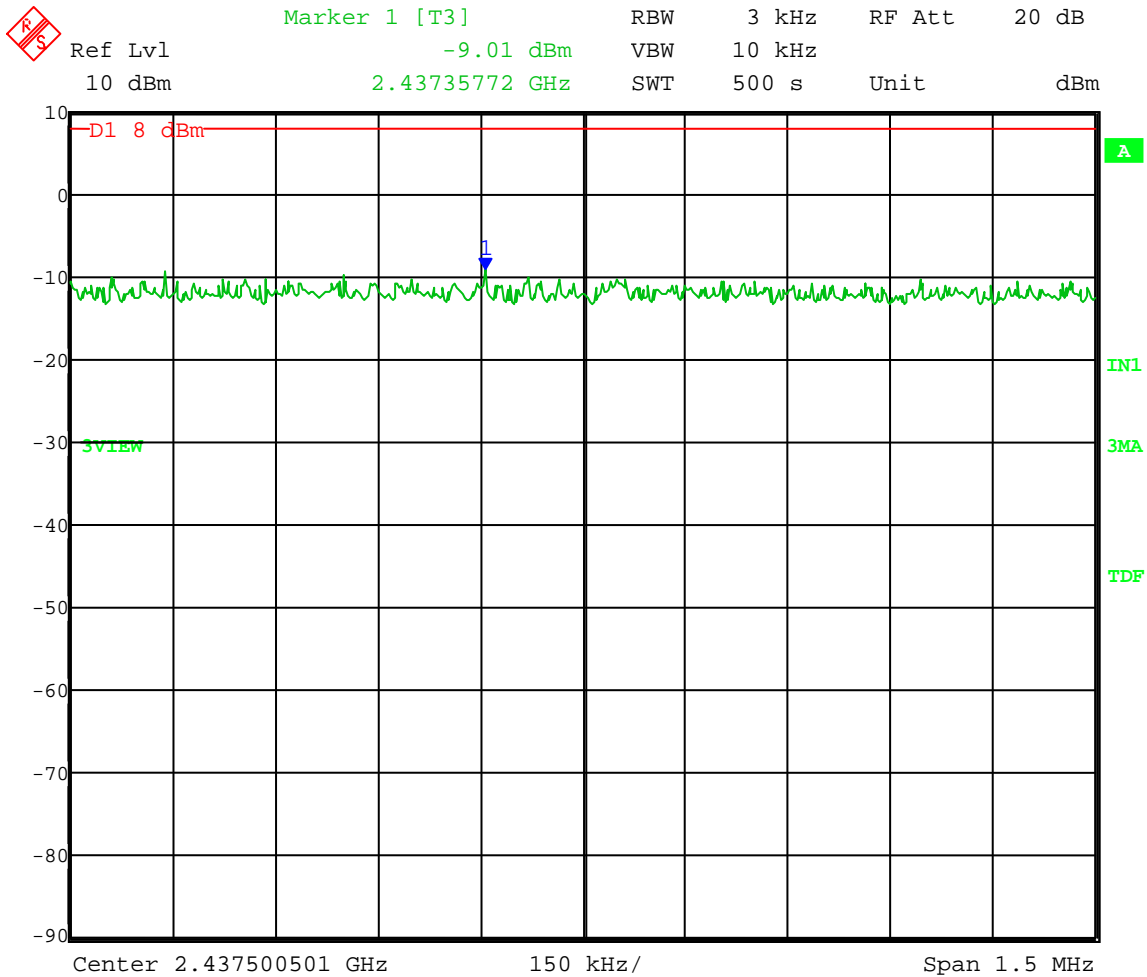
Appendix B – Measurement Data

Test Date: 12-12-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig B

Comment: **Middle Channel:** Frequency – 2.437 GHz
 802.11b

Limit: 8 dBm

3 kHz Bandwidth: -9.01 dBm



Date: 12.DEC.2011 13:29:06



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

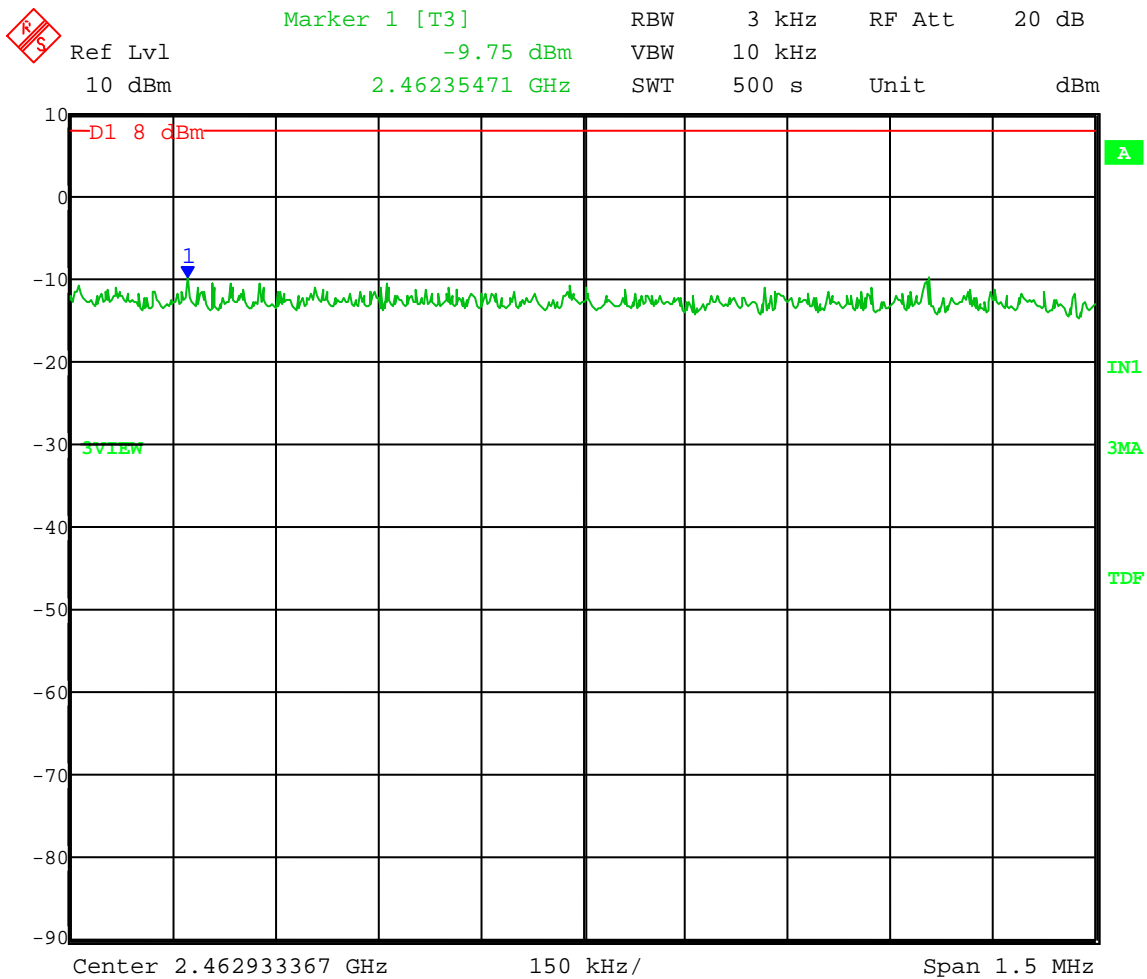
Appendix B – Measurement Data

Test Date: 12-12-2011
Company: Koss Corporation
EUT: CC05
Test: Peak Power Spectral Density - Conducted
Operator: Craig B

Comment: **High Channel**: Frequency – 2.462 GHz
802.11b

Limit: 8 dBm

3 kHz Bandwidth: -9.75 dBm



Date: 12.DEC.2011 13:41:07



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

B6.0 Radiated Emissions in Restricted Bands (1 to 26 GHz)

Rule Part: FCC Part 15.247(d) and FCC Part 15.205

Test Procedure: Measurement of Digital Transmission Systems Operating under Section 15.247 (March 23, 2005), FCC Publication KDB 558074

Limit: FCC Part 15.209

Results: Compliant

Notes: The EUT was set to transmit at its maximum power and maximum data rate. Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz. Since the EUT is not able to transmit continuously, compliance with the Average limits are shown by applying a duty cycle correction factor to a peak detector measurement.

Radiated Spurious Emissions in Restricted Bands
Tested at a 3 Meter Distance 1 GHz to 18 GHz
Tested at a 1 Meter Distance 18 GHz to 26 GHz

EUT: CC05
Manufacturer: Koss Corporation
Operating Condition: 70 deg F; 50% R.H.
Test Site: Site G1
Operator: Craig B
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: 802.11b/g
Date: 09/19/2011

- Notes:** (1) Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz
(2) Since EUT is not transmitting continuously, compliance with the Average limits are shown by applying a duty cycle correction factor to a peak detector measurement.
(3) All other restricted band emissions at least 20 dB under the limit.

Channel 1 (2.412 GHz):

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Duty Cycle Correction (dB)	Final Corrected (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Comment
4.824	Average	Vert	51.02	33.06	-38.9	45.2	-22.2	23.0	54	31.0	Res. Band
4.824	Max Peak	Vert	51.02	33.06	-38.9	45.2	---	45.2	74	28.8	Res. Band
4.824	Average	Horz	52.08	33.06	-38.9	46.2	-22.2	24.0	54	30.0	Res. Band
4.824	Max Peak	Horz	52.08	33.06	-38.9	46.2	---	46.2	74	27.8	Res. Band
12.060	Average	Vert	Noise Floor				-22.2		54		Res. Band
12.060	Max Peak	Vert	Noise Floor				---		74		Res. Band
12.060	Average	Horz	Noise Floor				-22.2		54		Res. Band
12.060	Max Peak	Horz	Noise Floor				---		74		Res. Band
14.472	Average	Vert	Noise Floor				-22.2		54		Res. Band
14.472	Max Peak	Vert	Noise Floor				---		74		Res. Band
14.472	Average	Horz	Noise Floor				-22.2		54		Res. Band
14.472	Max Peak	Horz	Noise Floor				---		74		Res. Band
19.296	Average	Vert	52.36	40.03	-37.5	54.9	-22.2	32.7	64	31.3	Res. Band
19.296	Max Peak	Vert	52.36	40.03	-37.5	54.9	---	54.9	84	29.1	Res. Band
19.296	Average	Horz	53.94	40.03	-37.5	56.5	-22.2	34.3	64	29.7	Res. Band
19.296	Max Peak	Horz	53.94	40.03	-37.5	56.5	---	56.5	84	27.5	Res. Band

Radiated Spurious Emissions in Restricted Bands
Tested at a 3 Meter Distance 1 GHz to 18 GHz
Tested at a 1 Meter Distance 18 GHz to 26 GHz

EUT: CC05
Manufacturer: Koss Corporation
Operating Condition: 70 deg F; 50% R.H.
Test Site: Site G1
Operator: Craig B
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: 802.11b/g
Date: 09/19/2011

- Notes:** (1) Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz
(2) Since EUT is not transmitting continuously, compliance with the Average limits are shown by applying a duty cycle correction factor to a peak detector measurement.
(3) All other restricted band emissions at least 20 dB under the limit.

Channel 6 (2.437 GHz):

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Duty Cycle Correction (dB)	Final Corrected (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Comment
4.874	Average	Vert	53.59	33.10	-39.3	47.4	-22.2	25.2	54	28.8	Res. Band
4.824	Max Peak	Vert	53.59	33.10	-39.3	47.4	---	47.4	74	26.6	Res. Band
4.874	Average	Horz	55.65	33.10	-39.3	49.5	-22.2	27.3	54	26.8	Res. Band
4.874	Max Peak	Horz	55.65	33.10	-39.3	49.5	---	49.5	74	24.6	Res. Band
7.311	Average	Vert	Noise Floor				-22.2		54		Res. Band
7.311	Max Peak	Vert	Noise Floor				---		74		Res. Band
7.311	Average	Horz	Noise Floor				-22.2		54		Res. Band
7.311	Max Peak	Horz	Noise Floor				---		74		Res. Band
12.185	Average	Vert	Noise Floor				-22.2		54		Res. Band
12.185	Max Peak	Vert	Noise Floor				---		74		Res. Band
12.185	Average	Horz	Noise Floor				-22.2		54		Res. Band
12.185	Max Peak	Horz	Noise Floor				---		74		Res. Band
19.496	Average	Vert	53.21	40.05	-37.2	56.1	-22.2	33.9	64	30.1	Res. Band
19.496	Max Peak	Vert	53.21	40.05	-37.2	56.1	---	56.1	84	27.9	Res. Band
19.496	Average	Horz	51.81	40.05	-37.2	54.7	-22.2	32.5	64	31.5	Res. Band
19.496	Max Peak	Horz	51.81	40.05	-37.2	54.7	---	54.7	84	29.3	Res. Band

Radiated Spurious Emissions in Restricted Bands
Tested at a 3 Meter Distance 1 GHz to 18 GHz
Tested at a 1 Meter Distance 18 GHz to 26 GHz

EUT: CC05
Manufacturer: Koss Corporation
Operating Condition: 70 deg F; 50% R.H.
Test Site: Site G1
Operator: Craig B
Test Specification: FCC Part 15.247(d) and FCC Part 15.205
Comment: 802.11b/g
Date: 09/19/2011

- Notes:** (1) Peak measurements were taken with RBW = 1 MHz, VBW = 3 MHz
(2) Since EUT is not transmitting continuously, compliance with the Average limits are shown by applying a duty cycle correction factor to a peak detector measurement.
(3) All other restricted band emissions at least 20 dB under the limit.

Channel 11 (2.462 GHz):

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Duty Cycle Correction (dB)	Final Corrected (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Comment
4.924	Average	Vert	53.88	33.18	-39.7	47.4	-22.2	25.2	54	28.8	Res. Band
4.924	Max Peak	Vert	53.88	33.18	-39.7	47.4	---	47.4	74	26.6	Res. Band
4.924	Average	Horz	57.19	33.18	-39.7	50.7	-22.2	28.5	54	25.5	Res. Band
4.924	Max Peak	Horz	57.19	33.18	-39.7	50.7	---	50.7	74	23.3	Res. Band
7.386	Average	Vert	Noise Floor				-22.2		54		Res. Band
7.386	Max Peak	Vert	Noise Floor				---		74		Res. Band
7.386	Average	Horz	Noise Floor				-22.2		54		Res. Band
7.386	Max Peak	Horz	Noise Floor				---		74		Res. Band
12.310	Average	Vert	Noise Floor				-22.2		54		Res. Band
12.310	Max Peak	Vert	Noise Floor				---		74		Res. Band
12.310	Average	Horz	Noise Floor				-22.2		54		Res. Band
12.310	Max Peak	Horz	Noise Floor				---		74		Res. Band
19.696	Average	Vert	54.35	40.07	-37.1	57.3	-22.2	35.1	64	28.9	Res. Band
19.696	Max Peak	Vert	54.35	40.07	-37.1	57.3	---	57.3	84	26.7	Res. Band
19.696	Average	Horz	51.17	40.07	-37.1	54.1	-22.2	31.9	64	32.1	Res. Band
19.696	Max Peak	Horz	51.17	40.07	-37.1	54.1	---	54.1	84	29.9	Res. Band



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

B6.1 Radiated Emissions (30 MHz to 1 GHz)

Rule Part: FCC 15.247(d); 15.209

Test Procedure: ANSI C63.4, 2009

Limit: FCC 15.109 / 15.209:

Frequency of Emission (MHz)	Field Strength (microvolts/meter)
30 - 88	100
88 - 216	150
216 - 960	200
Above 960	500

Results: PASS

Notes: The measurement bandwidth on the receiver was set to 120 kHz. The detector was set to Quasi-Peak. The test distance was 3 meters.

FCC Part 15 Class B

Electric Field Strength

EUT: CC05
Manufacturer: Koss Corporation
Operating Condition: 70 deg F 48% R.H.
Test Site: DLS O.F. G1
Operator: Craig B
Test Specification: 802.11b/g Transmit & Receive modes; Low, Mid, and High channels
Comment: Tested with AC power adapter
Date: 09-22-2011

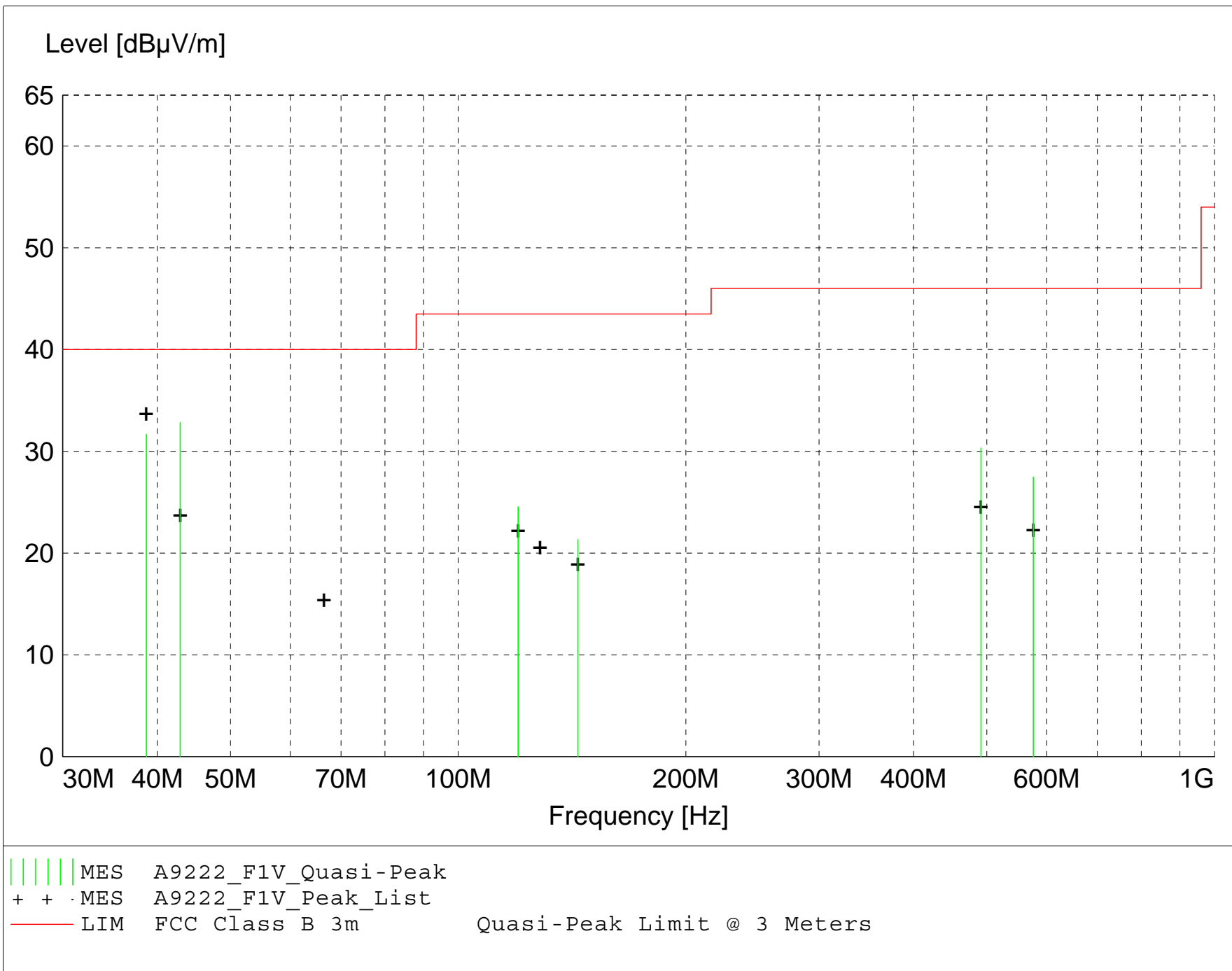
TEXT: "Vert 3 meters"

Short Description: Test Set-up

Test Set-up: EUT Measured at 3 Meters with VERTICAL Antenna Polarization

Equations: $Total\ Level\ (dB\mu V/m) = Level\ (dB\mu V) + System\ Loss\ (dB) + Antenna\ Factor\ (dB\mu V/m)$
 $Margin\ (dB) = Limit\ (dB\mu V/m) - Total\ Level\ (dB\mu V/m)$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average dector
Final maximized level using Peak detector
- Background Scan Peak Detector (Optional)
- Background Scan Average Detector (Optional)



MEASUREMENT RESULT: "A9222_F1V_Final"

9/22/2011 1:45PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBµV	Factor	Loss	Level	dBµV/m	dB	Ant.	Angle	Detector	
		dBµV/m	dB	dBµV/m	dBµV/m		m	deg		
42.900000	45.81	11.92	-24.9	32.8	40.0	7.2	1.00	0	QUASI-PEAK	None
38.700000	45.37	11.26	-25.0	31.7	40.0	8.3	1.00	150	QUASI-PEAK	None
491.150000	32.73	17.87	-20.3	30.3	46.0	15.7	1.00	45	QUASI-PEAK	None
576.100000	28.35	18.70	-19.6	27.5	46.0	18.5	1.00	162	QUASI-PEAK	None
120.000000	33.56	14.69	-23.7	24.6	43.5	18.9	1.00	243	QUASI-PEAK	None
144.000000	31.71	12.72	-23.1	21.3	43.5	22.2	1.00	0	QUASI-PEAK	None

FCC Part 15 Class B

Electric Field Strength

EUT: CC05
Manufacturer: Koss Corporation
Operating Condition: 70 deg F 48% R.H.
Test Site: DLS O.F. G1
Operator: Craig B
Test Specification: 802.11b/g Transmit & Receive modes; Low, Mid, and High channels
Comment: Tested with AC power adapter
Date: 09-22-2011

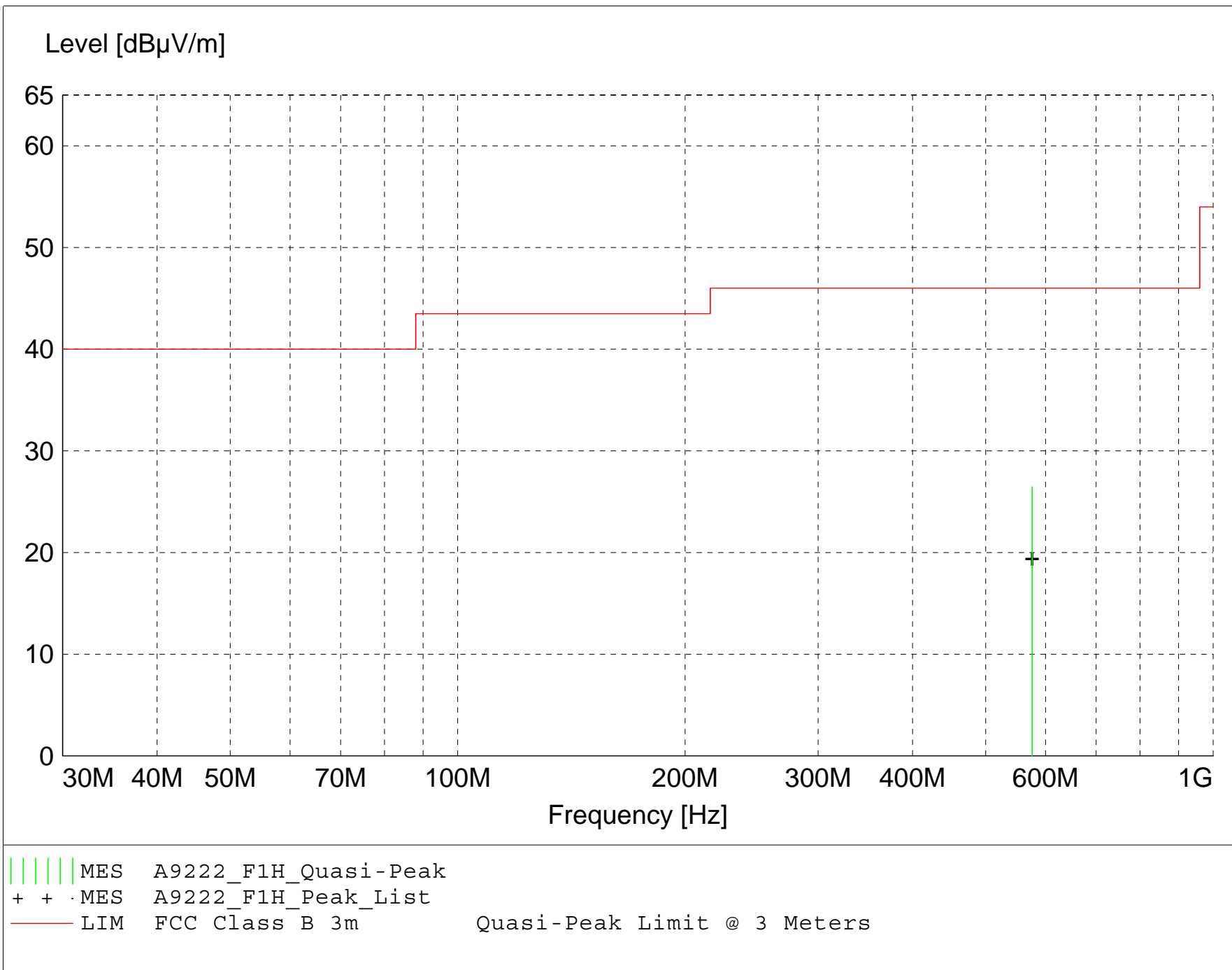
TEXT: "Horz 3 meters"

Short Description: Test Set-up

Test Set-up: EUT Measured at 3 Meters with HORIZONTAL Antenna Polarization

Equations:
$$\text{Total Level (dB}\mu\text{V/m)} = \text{Level (dB}\mu\text{V)} + \text{System Loss (dB)} + \text{Antenna Factor (dB}\mu\text{V/m)}$$
$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Total Level (dB}\mu\text{V/m)}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average dector
Final maximized level using Peak detector
- Background Scan Peak Detector (Optional)
- Background Scan Average Detector (Optional)



MEASUREMENT RESULT: "A9222_F1H_Final"

9/22/2011 1:49PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dB μ V	Factor	Loss	Level	dB μ V/m	dB	Ant.	Angle	Detector	
		dB μ V/m	dB	dB μ V/m			m	deg		
576.090000	27.36	18.70	-19.6	26.5	46.0	19.5	1.87	212	QUASI-PEAK	None



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

B7.0 Duty Cycle of Test Unit (maximum possible)

Rule Part: Section 15.35(c)

Test Procedure: ANSI C63.4-2009

Limit: Not Applicable

Results: Duty Cycle = 7.725% over a 100 ms period
Duty Cycle Correction = 22.2 dB

Sample Equations: 30 pulses during 100 ms period
0.2575 ms/pulse
Total ON time during 100 ms = 7.725 ms
 $20 \text{ Log } (7.725/100) = 22.242$
Duty cycle correction factor = 22.2 dB

Notes: Since the EUT is not able to transmit continuously, compliance with Average limits are shown by applying a duty cycle correction factor to a peak detector measurement.



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

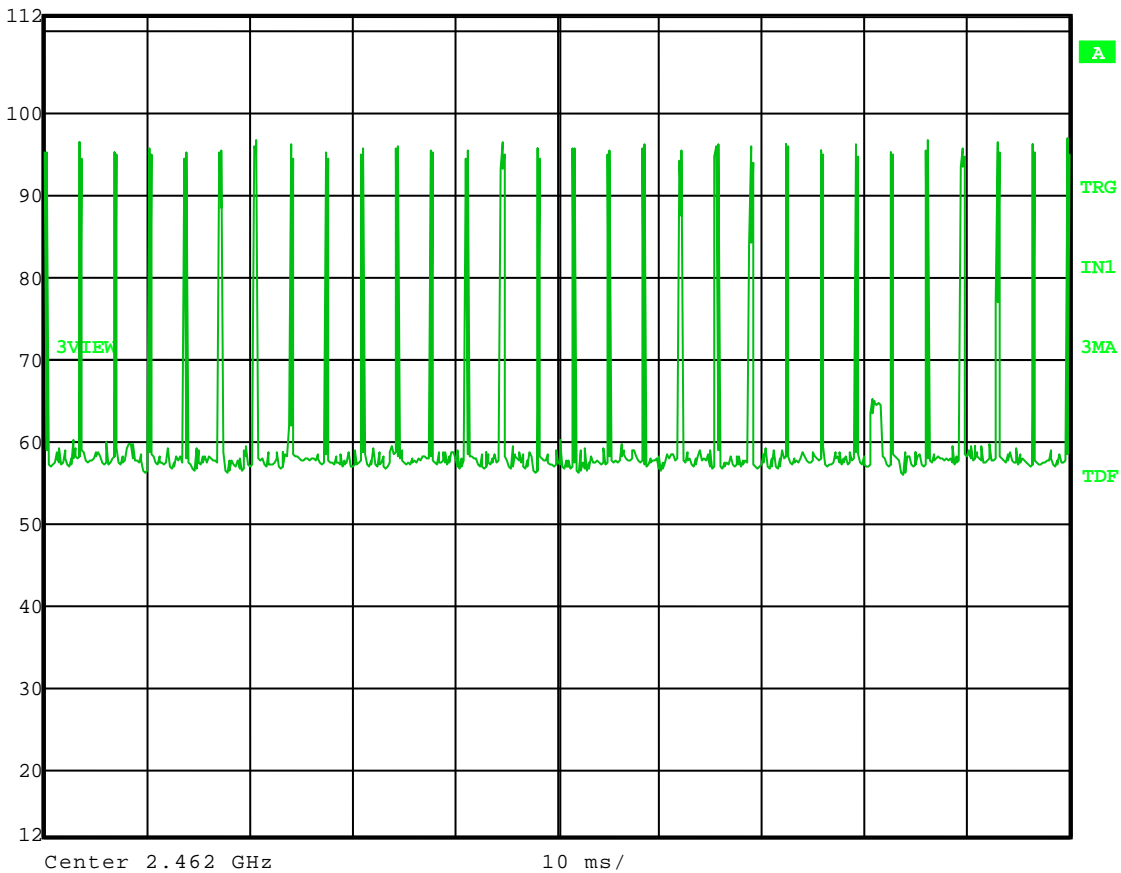
Appendix B – Measurement Data

Test Date: 09-19-2011
Company: Koss Corporation
EUT: CC05
Test: Duty Cycle – duty cycle used during testing (special test software)
Operator: Craig B

Comment: 30 pulses
0.2575 ms/pulse
ON time during 100 ms = 7.725 ms
20 Log (7.725/100) = 22.242
Duty cycle correction factor = 22.2 dB

Number of pulses during 100 ms period:

	Max/Ref Lvl	RBW	1 MHz	RF Att	0 dB
	112 dB*	VBW	3 MHz		
	72 dB*	SWT	100 ms	Unit	dBµV/m



Date: 19.SEP.2011 10:53:01



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
 Model Tested: STRIVA PRO
 Report Number: 17287

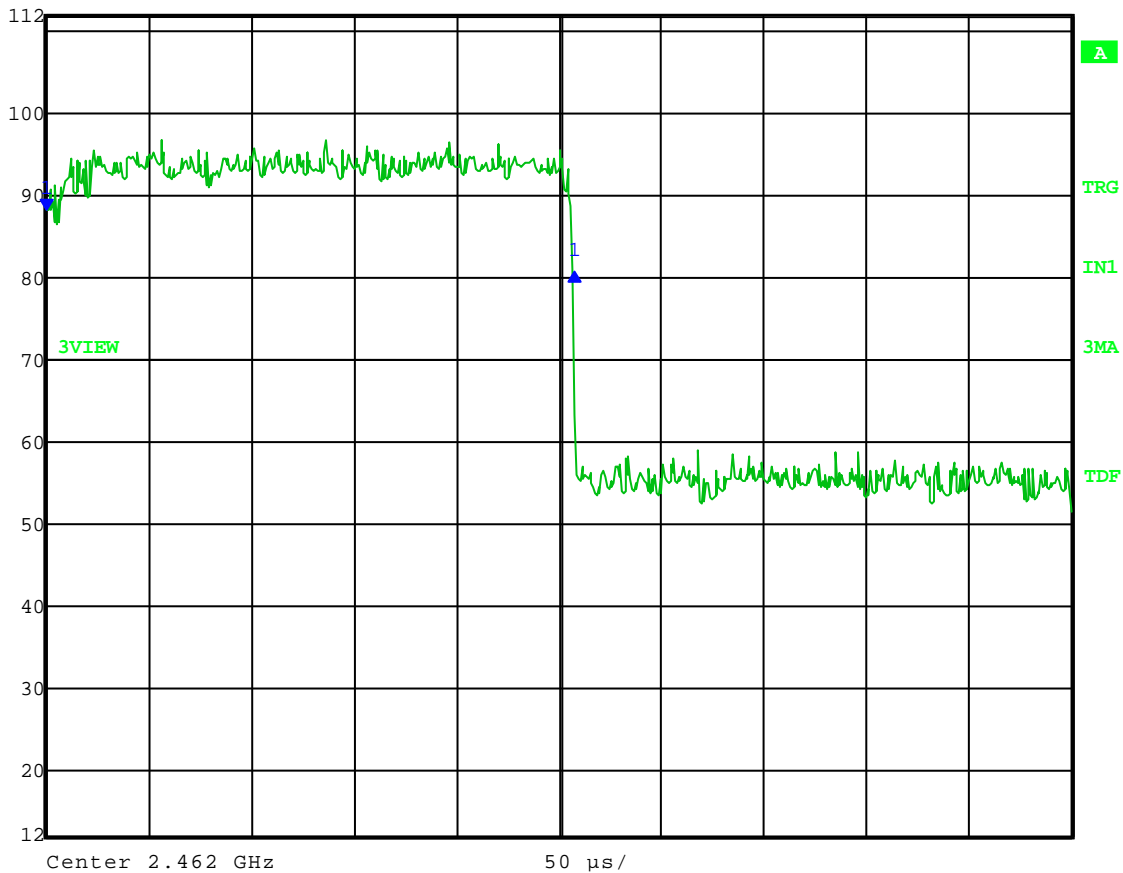
Appendix B – Measurement Data

Test Date: 09-19-2011
 Company: Koss Corporation
 EUT: CC05
 Test: Duty Cycle – duty cycle used during testing (special test software)
 Operator: Craig B

Comment: 30 pulses
 0.2575 ms/pulse
 ON time during 100 ms = 7.725 ms
 20 Log (7.725/100) = 22.242
 Duty cycle correction factor = 22.2 dB

ON time of one pulse:

	Max/Ref Lvl	Delta 1 [T3]	RBW	1 MHz	RF Att	0 dB
	112 dB*	-7.44 dB	VBW	3 MHz		
	72 dB*	257.515030 μ s	SWT	500 μ s	Unit	dB μ V/m



Date: 19.SEP.2011 10:51:41



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

Appendix B – Measurement Data

B8.0 AC Line Conducted Emissions

Rule Part: FCC Part 15.207

Test Procedure: ANSI C63.4-2009

Limit: 15.207(a)

Results: Compliant

Notes: This was an AC Conducted emissions measurement.
The EUT was powered from an included AC Adapter with an input of 120 VAC
60 Hz.

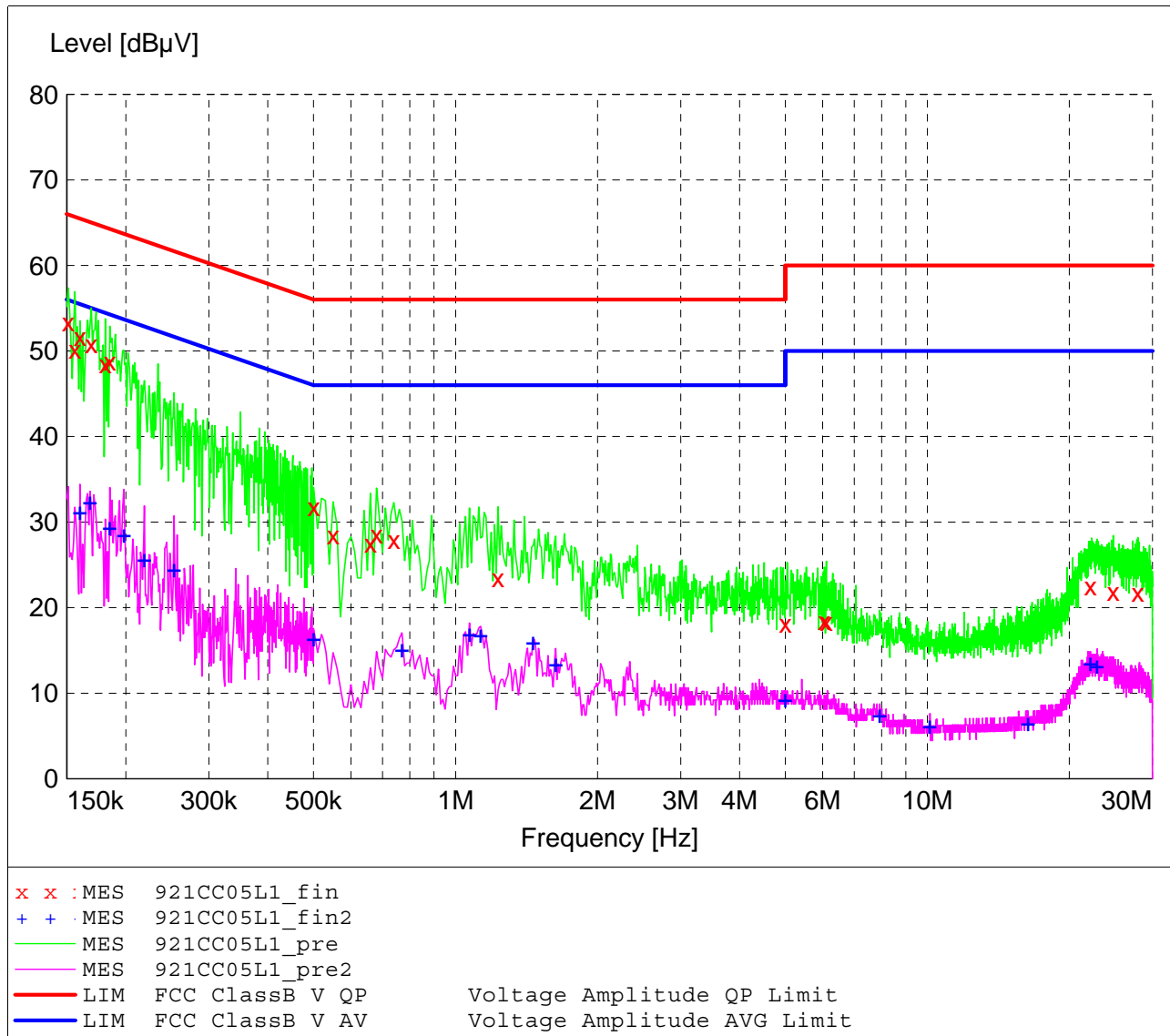
FCC Part 15.207 Class B

Voltage Mains Test

EUT: CC05
 Manufacturer: Koss Corporation
 Operating Condition: 70 deg. F, 49% R.H.
 Test Site: DLS Screen Room
 Operator: Craig B
 Test Specification: 120 V 60 Hz
 Comment: Line 1; charging and transmitting
 Date: 09-21-2011

SCAN TABLE: "Line Cond SR Final"

Short Description:		Line Conducted Emissions					Transducer
Start	Stop	Step	Detector	Meas. Time	IF Bandw.		
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	5.0 s	9 kHz	LISN DLS#128	
							CISPR AV



MEASUREMENT RESULT: "921CC05L1_fin"

9/21/2011 3:06PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.151000	53.30	13.8	66	12.6	QP
0.156000	50.20	13.6	66	15.5	QP
0.160000	51.60	13.5	66	13.9	QP
0.169000	50.80	13.3	65	14.2	QP
0.181000	48.40	13.1	64	16.0	QP
0.185000	48.80	13.0	64	15.5	QP
0.500000	31.70	11.1	56	24.3	QP
0.550000	28.40	11.1	56	27.6	QP
0.660000	27.50	10.9	56	28.5	QP
0.680000	28.50	10.9	56	27.5	QP
0.740000	27.90	10.8	56	28.1	QP
1.230000	23.50	10.7	56	32.5	QP
5.000000	18.10	10.8	56	37.9	QP
6.050000	18.40	10.7	60	41.6	QP
6.110000	18.30	10.8	60	41.7	QP
22.160000	22.50	11.5	60	37.5	QP
24.770000	21.80	11.5	60	38.2	QP
27.950000	21.70	11.6	60	38.3	QP

MEASUREMENT RESULT: "921CC05L1_fin2"

9/21/2011 3:06PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.160000	31.20	13.5	56	24.3	CAV
0.168000	32.40	13.3	55	22.7	CAV
0.185000	29.40	13.0	54	24.9	CAV
0.198000	28.60	12.8	54	25.1	CAV
0.219000	25.70	12.5	53	27.2	CAV
0.253000	24.50	12.2	52	27.2	CAV
0.500000	16.40	11.1	46	29.6	CAV
0.770000	15.10	10.8	46	30.9	CAV
1.070000	17.00	10.7	46	29.0	CAV
1.130000	16.80	10.7	46	29.2	CAV
1.460000	16.00	10.7	46	30.0	CAV
1.630000	13.40	10.7	46	32.6	CAV
5.000000	9.30	10.8	46	36.7	CAV
7.925000	7.50	10.8	50	42.5	CAV
10.130000	6.20	10.9	50	43.8	CAV
16.340000	6.50	11.2	50	43.5	CAV
22.160000	13.50	11.5	50	36.5	CAV
22.910000	13.20	11.5	50	36.8	CAV

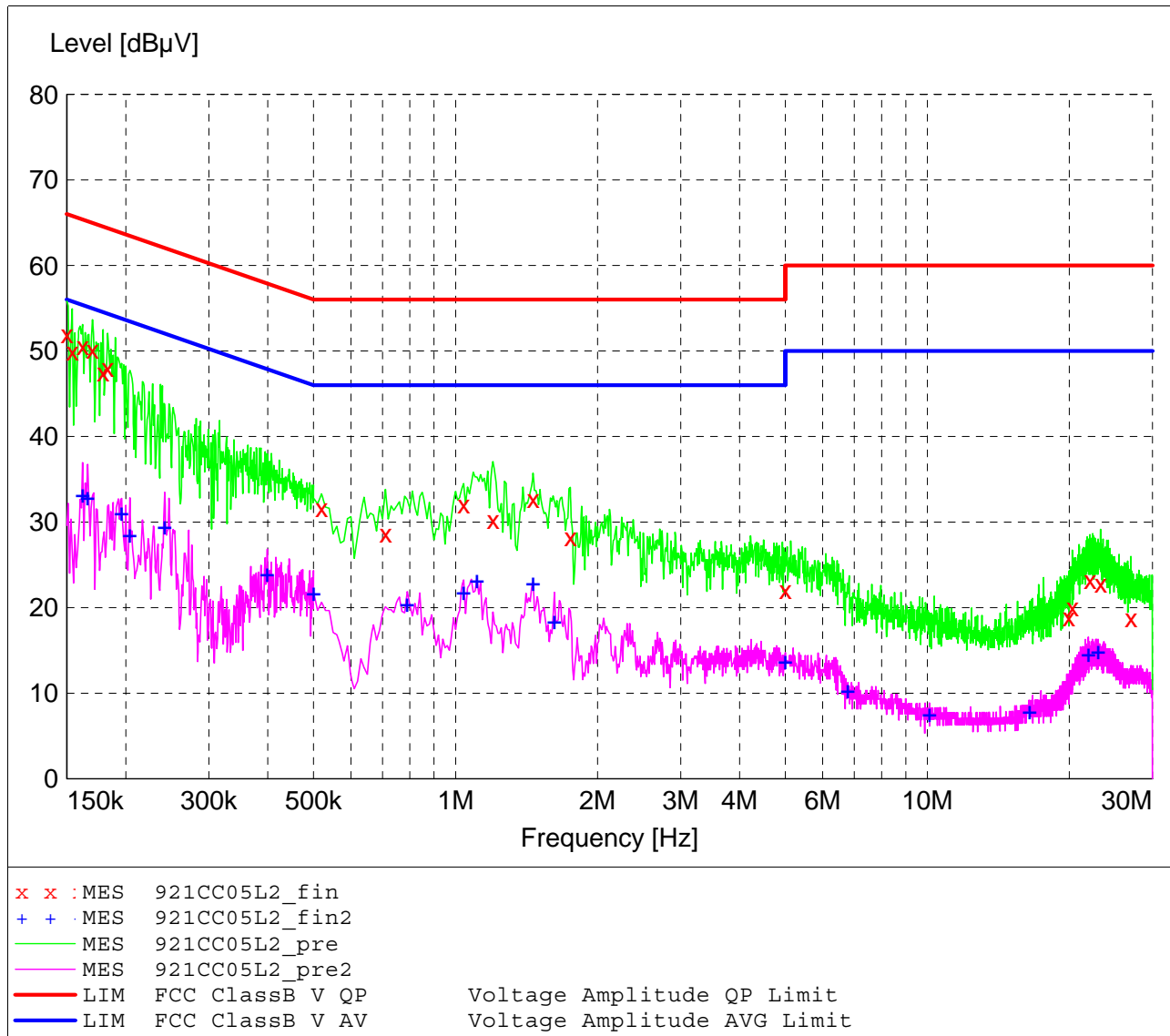
FCC Part 15.207 Class B

Voltage Mains Test

EUT: CC05
 Manufacturer: Koss Corporation
 Operating Condition: 70 deg. F, 49% R.H.
 Test Site: DLS Screen Room
 Operator: Craig B
 Test Specification: 120 V 60 Hz
 Comment: Line 2; charging and transmitting
 Date: 09-21-2011

SCAN TABLE: "Line Cond SR Final"

Short Description:		Line Conducted Emissions				Transducer
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	5.0 s	9 kHz	LISN DLS#128
CISPR AV						



MEASUREMENT RESULT: "921CC05L2_fin"

9/21/2011 3:13PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.150000	52.00	13.8	66	14.0	QP
0.154000	49.90	13.7	66	15.9	QP
0.162000	50.60	13.4	65	14.8	QP
0.170000	50.10	13.2	65	14.9	QP
0.179000	47.50	13.1	65	17.0	QP
0.183000	48.00	13.0	64	16.3	QP
0.520000	31.60	11.1	56	24.4	QP
0.710000	28.70	10.9	56	27.3	QP
1.040000	32.10	10.7	56	23.9	QP
1.200000	30.20	10.7	56	25.8	QP
1.460000	32.70	10.7	56	23.3	QP
1.750000	28.20	10.7	56	27.8	QP
5.000000	22.00	10.8	56	34.0	QP
19.940000	18.90	11.4	60	41.1	QP
20.285000	20.00	11.4	60	40.0	QP
22.115000	23.20	11.5	60	36.8	QP
23.285000	22.80	11.5	60	37.2	QP
27.005000	18.70	11.6	60	41.3	QP

MEASUREMENT RESULT: "921CC05L2_fin2"

9/21/2011 3:13PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.162000	33.20	13.4	55	22.2	CAV
0.166000	32.90	13.3	55	22.3	CAV
0.196000	31.10	12.8	54	22.7	CAV
0.204000	28.60	12.6	53	24.8	CAV
0.242000	29.50	12.3	52	22.5	CAV
0.399000	24.00	11.5	48	23.9	CAV
0.500000	21.70	11.1	46	24.3	CAV
0.790000	20.50	10.8	46	25.5	CAV
1.040000	21.80	10.7	46	24.2	CAV
1.110000	23.20	10.7	46	22.8	CAV
1.460000	22.90	10.7	46	23.1	CAV
1.620000	18.40	10.7	46	27.6	CAV
5.000000	13.80	10.8	46	32.2	CAV
6.785000	10.40	10.8	50	39.6	CAV
10.100000	7.60	10.9	50	42.4	CAV
16.475000	7.90	11.2	50	42.1	CAV
21.935000	14.60	11.5	50	35.4	CAV
23.015000	14.90	11.5	50	35.1	CAV



166 South Carter, Genoa City, WI 53128

Company: Koss Corporation
Model Tested: STRIVA PRO
Report Number: 17287

END OF REPORT

Revision #	Date	Comments	By
1.0	10-11-11	Preliminary Release	CB
1.1	12-14-11	Added 802.11b mode data & changed model from CC05 to STRIVA PRO	CB
1.2	04-23-12	Added crystal info on page 7 (verification testing done 4/11/12)	JS