FCC 15.209
TEST REPORT

for

AM 58 kHz System

Model: AS-CU6

Prepared for

AMERICAN SECURITY SPOL. S R.O.
K VILKAM 1633
107 00 PRAGUE 10 - DUBEC, CZECH REPUBLIC

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DATE: AUGUST 19, 2013

	REPORT BODY	APPENDICES					TOTAL
		A	***B***	***C***	***D***	***E***	
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GENERAL REPORT SUMMARY

Compatible Electronics Inc. generates this emissions test report, which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested:	AM 58 kHz System Model: AS-CU6 S/N: N/A
Product Description:	See Expository Statement
Modifications:	The EUT was not modified during the testing.
Customer:	American Security spol. s r.o. K Vilkam 1633 107 00 Prague 10 - Dubec, Czech Republic
Test Date(s):	July 22, 23, and 24, 2013
Test Specifications:	EMI requirements CFR Title 47, Part 15 Subpart B; and Subpart C, Sections 15.205 and 15.209
Test Procedure:	ANSI C63.4
Test Deviations:	The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions 150 kHz to 30 MHz	Complies with the **Class A** limits of **CFR** Title 47, Part 15, Subpart B; and Subpart C Section 15.207.
2	Radiated RF Emissions 9 kHz – 1000 MHz	Complies with the **Class A** limits of **CFR** Title 47, Part 15, Subpart B; and Subpart C Sections 15.205 and 15.209.

1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the AM 58 kHz System, Model: AS-CU6. The emissions measurements were performed according to the measurement procedure described in ANSI C63.4. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the **Class A** specification limits defined by CFR Title 47, Part 15, Subpart B for the digital portion; and Subpart C, sections 15.205, 15.207, and 15.209 for the transmitter portion.

Note: The receiver portion was not performed because it is exempt from the technical provisions in CFR Title 47, Part 15, Subpart B per CFR Title 47, Part 15, Subpart B, section 15.101 (b).

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

American Security spol. s r.o.

Clint Meyer	Technical Manager

Compatible Electronics Inc.

Kyle Fujimoto	Test Engineer
James Ross	Test Engineer

2.4 Date Test Sample was Received

The test sample was received prior to the date of testing.

2.5 Disposition of the Test Sample

The test sample was returned prior to the date of this report.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

FCC	Federal Communications Commission
RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
ITE	Information Technology Equipment
LISN	Line Impedance Stabilization Network
NVLAP	National Voluntary Laboratory Accreditation Program
CFR	Code of Federal Regulations
N/A	Not Applicable
Ltd.	Limited
Inc.	Incorporated
IR	Infrared

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this emissions Test Report.

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4: 2009	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration – Emissions

The AM 58 kHz System, Model: AS-CU6 (EUT) was configured as follows:

CONTROLLER BOX		
Port Name	**Connected To**	**Comments**
TX1	Pedestal #1	TX1 transmits to Pedestal #1
TX2	Pedestal #2	TX2 transmits to Pedestal #2
RX1	Pedestal #1	The EUT receives from Pedestal #1
RX2	Pedestal #1	The EUT receives from Pedestal #2
RX3	Accessory Receiver PCB #1	This is only for termination purposes to fully terminate the controller box
RX4	Accessory Receiver PCB #2	This is only for termination purposes to fully terminate the controller box
Relay 1	Unterminated	1-meter unterminated cable connected for worst case configuration
Relay 2	Unterminated	1-meter unterminated cable connected for worst case configuration
Sync	Accessory Controller	The Accessory Controller provides a signal for the Controller
PC Port	E-comm	Accessory used to conenct the EUT to the internet.

The controller box was connected to an E-comm vits its PC port.

The E-comm was also connected to a router and AC Adapter via its ethernet and power ports, respectively.

The entire system was continuously transmitting and receiving at 58.2 kHz. The EUT was tested in both its minimum power and maximum power.

Note: The digital portion emissions were tested to the **Class A** limits specification limits defined by CFR Title 47, Part 15, Subpart B.

It was determined that the emissions were at their highest level when the EUT was operating in the above configuration. The final emissions data was taken in this mode of operation and any cables were maximized. All initial investigations were performed with the measurement receiver in manual mode scanning the frequency range continuously. Photographs of the test setup are in Appendix D of this report.

4.1.1 Cable Construction and Termination

Cable 1 This is a 29-meter unshielded cable connecting the E-comm to the router. The cable has an RJ-45 connector at each end.

Cable 2 This is a 1-meter unshielded cable connecting the E-comm to the controller (EUT). The cable has an RJ-11 connector at each end.

Cable 3 This is a 6-meter unshielded cable connecting the controller (EUT) to pedestal #1. The cable has a 4-pin terminal block at each end. The cable was bundled to a length of 2-meters.

Cable 4 This is a 6-meter unshielded cable connecting the controller (EUT) to pedestal #2. The cable has a 4-pin terminal block at each end. The cable was bundled to a length of 2-meters.

Cable 5 This is a 6-meter unshielded cable connecting the controller (EUT) to pedestal #1. The cable has an RJ-45 connector at each end. The cable was bundled to a length of 2-meters.

Cable 6 This is a 6-meter unshielded cable connecting the controller (EUT) to pedestal #2. The cable has an RJ-45 connector at each end. The cable was bundled to a length of 2-meters.

Cable 7 This is a 6-meter unshielded cable connecting the controller (EUT) to receiver PCB #1. The cable has an RJ-45 connector at each end. The cable was bundled to a length of 2-meters.

Cable 8 This is a 6-meter unshielded cable connecting the controller (EUT) to receiver PCB #2. The cable has an RJ-45 connector at each end. The cable was bundled to a length of 2-meters.

Cable 9 This is a 2-meter unshielded, unterminated cable connecting the controller's Relay #1 port (EUT). The cable has a 3-pin terminal block connector at the controller end. The cable was bundled to a length of 40-centimeters.

Cable 10 This is a 2-meter unshielded, unterminated cable connecting the controller's Relay #2 port (EUT). The cable has a 3-pin terminal block connector at the controller end. The cable was bundled to a length of 40-centimeters.

Cable 11 This is a 2-meter unshielded, unterminated cable connecting the controller's sync port (EUT). The cable has a 3-pin terminal block connector at the controller end. The cable was bundled to a length of 40-centimeters.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
AM 58 kHz SYSTEM (EUT)	AMERICAN SECURITY SPOL. S R.O.	AS-CU6	N/A	UXT-AS-CU6
E-COMM	AMERICAN SECURITY SPOL. S R.O.	D-ECOM	N/A	N/A
E-COMM POWER SUPPLY	STUNTRONICS	3A-066WPI2	N/A	N/A
ROUTER	D-LINK	DI-604	B25I159011999	N/A
PEDESTAL #1 (EUT)	AMERICAN SECURITY SPOL. S R.O.	AA-ANT	N/A	N/A
PEDESTAL #2 (EUT)	AMERICAN SECURITY SPOL. S R.O.	AA-ANT	N/A	N/A
RECEIVER BOARD PCB #1	AMERICAN SECURITY SPOL. S R.O.	PREAMP 05N: 6170	N/A	N/A
RECEIVER BOARD PCB #2	AMERICAN SECURITY SPOL. S R.O.	PREAMP 05N: 6170	N/A	N/A

5.2 Emissions Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
GENERAL TEST EQUIPMENT USED FOR ALL RF EMISSIONS TESTS					
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	2637A03618	May 6, 2013	1 Year
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	2648A13404	May 6, 2013	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	May 29, 2013	1 Year
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Radiated Emissions Data Capture Program	Compatible Electronics	2.0	N/A	N/A	N/A
CombiLog Antenna	Com-Power	AC-220	61060	May 29, 2013	1 Year
Loop Antenna	Com-Power	AL-130	17089	January 29, 2013	2 Year
Preamplifier	Com-Power	PA-103	1582	December 28, 2012	1 Year
Turntable	Com-Power	TT-100	N/A	N/A	N/A
Antenna-Mast	Com-Power	AM-100	N/A	N/A	N/A
RF CONDUCTED EMISSIONS TEST EQUIPMENT					
Emissions Program	Compatible Electronics	2.3 (SR19)	N/A	N/A	N/A
LISN	Com Power	LI-215	12082	June 17, 2013	1 Year
LISN	Com Power	LI-215	12090	June 17, 2013	1 Year
Transient Limiter	Seward	252A910	K39-0220	November 7, 2012	1 Year
VARIATION OF THE INPUT POWER TEST EQUIPMENT					
Variable Auto Transformer	Staco Energy Products	3PN1010	N/A	N/A	N/A
Multimeter	Fluke	87	58450372	June 3, 2013	1 Year

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1.2 of this report for emissions test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 0.8 meter non-conductive surface above the ground plane.

The EUT was not grounded.

6.3 Facility Environmental Characteristics

When applicable refer to the data sheets in Appendix E for the relative humidity, air temperature, and barometric pressure.

7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A transient limiter was used for the protection of the spectrum analyzer input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the spectrum analyzer. The output of the second LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics conducted emissions software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Note: Due to the fact the transmitter portion limits for conducted emissions (**FCC 15.207)** have a lower limit than the digital portion limits for conducted emissions (**Class A**), the data was taken with the lower limits (**FCC 15.207**).

Test Results:

The EUT complies with the **Class A (digital portion)** limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, section 15.207 **(transmitter portion)** for conducted emissions.

7.2 Radiated Emissions (Spurious, Fundamental, and Harmonics) Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. A preamplifier was used to increase the sensitivity of the instrument. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps.

The measurement bandwidths and transducers used for the radiated emissions test were:

The quasi-peak adapter was used only for those readings which are marked accordingly on the data sheets.

The fundamental readings were adjusted by a “duty cycle correction factor”, derived from 20 log (dwell time / dwell time + blanking interval).

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 1000 MHz	120 kHz	Combilog Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT (except for the fundamental) was tested at a 10-meter test distance to obtain the final test data.

Radiated Emissions (Spurious, Fundamental, and Harmonics) Test (Continued)

For the fundamental the EUT was tested at both a 10-meter test distance and a 15-meter test distance to obtain "P".

P is the roll-off multiplier used to determine the correct spec limit at 10 meters based on the following formula: [(P*20) Log (spec test distance / actual test distance)] + spec limit

P itself is determined by the following formula:
P = [Level (at 10 Meters) – Level (at 15 Meters)] / 20 Log (15 Meters / 10 Meters)

The final qualification data sheets are located in Appendix E.

Test Results:

The EUT complies with the **Class A (digital portion)** limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, sections 15.205, and 15.209 (transmitter portion) for radiated emissions.

7.3 Variation of the Input Power

The variation of the input power test was performed using the EMI Receiver. The EUT input power was varied between 85% and 115% of the nominal rated supply voltage. The carrier frequency was monitored for any change in amplitude.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15. 31(e).

7.4 RF Emissions Test Results

Table 1.0 CONDUCTED EMISSION RESULTS
AM 58 kHz System, Model: AS-CU6

Frequency MHz	Corrected Reading* dBuV	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
9.660 (White Lead) (Minimum Power)	45.54	50.00	-4.46
0.471 (White Lead) (Minimum Power)	41.73	46.49	-4.76
9.557 (White Lead) (Minimum Power)	45.24	50.00	-4.76
0.409 (White Lead) (Minimum Power)	42.91	47.68	-4.77
0.421 (White Lead) (Minimum Power)	42.41	47.42	-5.00
0.831 (White Lead) (Maximum Power)	40.96	46.00	-5.04

Table 2.0 RADIATED EMISSION RESULTS
AM 58 kHz System, Model: AS-CU6

Frequency MHz	Corrected Reading* dBuV	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
560.331 (V) (Minimum)	45.45 (Quasi-Peak)	46.44	-0.99
199.978 (V) (Minimum)	41.95 (Quasi-Peak)	43.52	-1.57
0.582 (V) (Minimum)	49.7	51.39	-1.69
200.006 (V) (Maximum)	41.32 (Quasi-Peak)	43.52	-2.20
199.994 (H) (Minimum)	41.13 (Quasi-Peak)	43.52	-2.39
199.986 (H) (Maximum)	41.02 (Quasi-Peak)	43.52	-2.50

Notes:
* The complete emissions data is given in Appendix E of this report.

8. CONCLUSIONS

The AM 58 kHz System, Model: AS-CU6, as tested, meets all of the **Class A** specification limits defined in CFR Title 47, Part 15, Subpart B for the digital portion; and the limits defined in Subpart C, sections 15.205, 15.207, and 15.209 for the transmitter portion.

APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

LABORATORY ACCREDITATIONS AND RECOGNITIONS

NVLAP LAB CODES 200063-0, 200528-0, 200527-0

For US, Canada, Australia/New Zealand, Japan, Taiwan, Korea, and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025. Please follow the link to the NIST/NVLAP site for each of our facilities' NVLAP certificate and scope of accreditation

NVLAP listing links
Agoura Division / Brea Division / Silverado/Lake Forest Division

.Quote from ISO-ILAC-IAF Communiqué on 17025:

"A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 Quality Management Systems — Requirements."

ANSI listing CETCB

Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for EMC under the US/EU Mutual Recognition Agreement (MRA).
US/EU MRA list NIST MRA site

Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for Taiwan/BSMI under the US/APEC (Asia-Pacific Economic Cooperation) Mutual Recognition Agreement (MRA).
APEC MRA list NIST MRA site

We are also listed for IT products by the following country/agency:

VCCI Support member: Please visit http://www.vcci.jp/vcci_e/

FCC Listing, from FCC OET site
FCC test lab search https://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm

Compatible Electronics IC listing can be found at:
http://www.ic.gc.ca/eic/site/ic1.nsf/eng/home

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.205, 15.207, FCC 15.209, or FCC **Class A** specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.

APPENDIX C

ADDITIONAL MODEL COVERED UNDER THIS REPORT

ADDITIONAL MODEL COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST	AM 58 kHz System Model: AS-CU6 S/N: N/A

There were no additional Model covered under this report.

APPENDIX D

DIAGRAMS, CHARTS AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP FOR TABLETOP UNITS

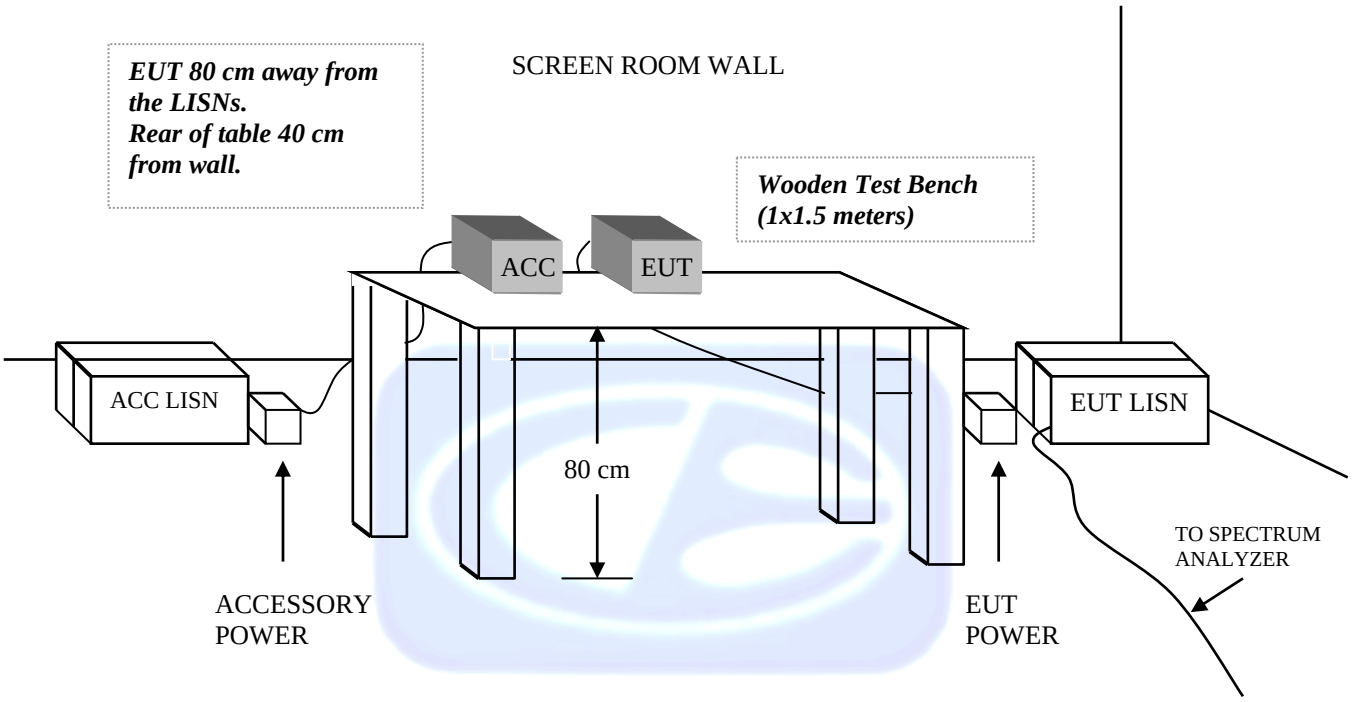
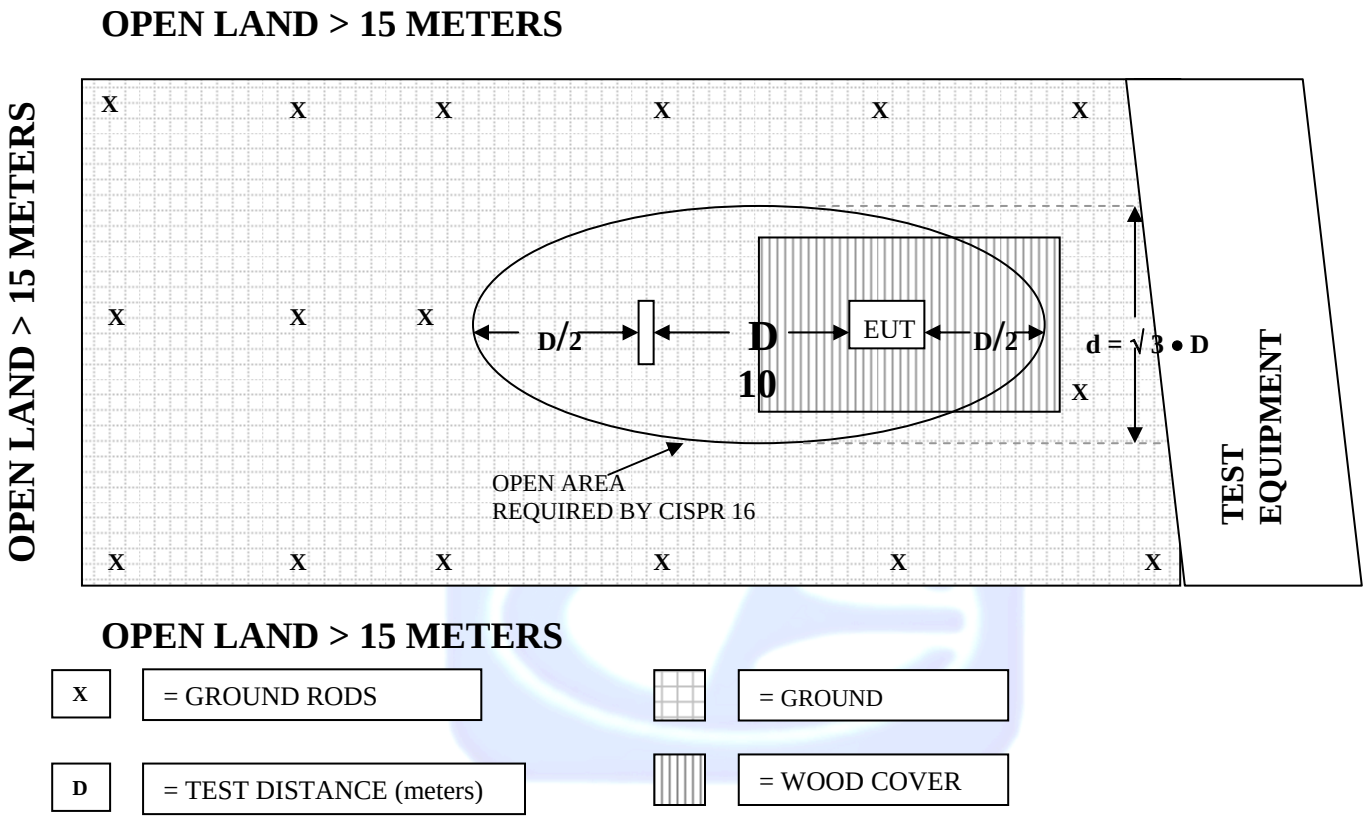


FIGURE 2: PLOT MAP AND LAYOUT OF THE RADIATED TEST SITE



COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: JANUARY 29, 2013

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-42.5	9
0.01	-42.3	9.2
0.02	-42.1	9.4
0.03	-41.4	10.1
0.04	-41.8	9.7
0.05	-42.4	9.1
0.06	-42.3	9.2
0.07	-42.5	9
0.08	-42.4	9.1
0.09	-42.5	9
0.1	-42.5	9
0.2	-42.7	8.8
0.3	-42.6	8.9
0.4	-42.5	9
0.5	-42.7	8.8
0.6	-42.7	8.8
0.7	-42.5	9
0.8	-42.3	9.2
0.9	-42.2	9.3
1	-42.2	9.3
2	-41.8	9.7
3	-41.7	9.8
4	-41.7	9.8
5	-41.5	10
6	-41.6	9.9
7	-41.4	10.1
8	-41	10.5
9	-40.8	10.7
10	-41.3	10.2
15	-41.4	10.1
20	-41.2	10.3
25	-42.6	8.9
30	-41.7	9.8

COM-POWER AC-220

COMBILOG ANTENNA

S/N: 61060

CALIBRATION DATE: MAY 29, 2013

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	19.40	200	9.10
35	19.10	250	11.40
40	19.70	300	11.90
45	18.00	350	14.20
50	16.80	400	15.20
60	12.50	450	16.50
70	7.30	500	17.10
80	4.40	550	16.20
90	8.00	600	17.70
100	8.80	650	19.10
120	10.50	700	20.00
125	10.60	750	21.50
140	8.60	800	21.50
150	11.20	850	21.70
160	8.90	900	22.70
175	9.60	950	22.10
180	8.50	1000	22.90

COM-POWER PA-103

PREAMPLIFIER

S/N: 1582

CALIBRATION DATE: DECEMBER 28, 2012

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	32.80	300	32.26
40	33.10	350	32.23
50	33.10	400	32.17
60	33.10	450	32.16
70	33.00	500	32.11
80	33.00	550	32.07
90	33.10	600	32.02
100	33.00	650	31.97
125	33.00	700	31.87
150	33.00	750	31.81
175	32.90	800	31.73
200	32.80	850	31.57
225	32.34	900	31.43
250	32.32	950	31.29
275	32.28	1000	31.14

FRONT VIEW

AMERICAN SECURITY SPOL. S R.O.
AM 58 kHz System
Model: AS-CU6
FCC 15.209 – RADIATED EMISSIONS – BELOW 30 MHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

AMERICAN SECURITY SPOL. S R.O.
AM 58 kHz System
Model: AS-CU6
FCC 15.209 – RADIATED EMISSIONS – BELOW 30 MHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

AMERICAN SECURITY SPOL. S R.O.
AM 58 kHz System
Model: AS-CU6
FCC SUBPART B – RADIATED EMISSIONS – ABOVE 30 MHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

AMERICAN SECURITY SPOL. S R.O.
AM 58 kHz System
Model: AS-CU6
FCC SUBPART B – RADIATED EMISSIONS – ABOVE 30 MHz

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

AMERICAN SECURITY SPOL. S R.O.
AM 58 kHz System
Model: AS-CU6
FCC 15.207 and FCC SUBPART B – CONDUCTED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

AMERICAN SECURITY SPOL. S R.O.
AM 58 kHz System
Model: AS-CU6
FCC 15.207 and FCC SUBPART B – CONDUCTED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

FCC 15.209
American Security spol. s r.o.
AM 58 kHz System
Model: AS-CU6

Date: 07/22/2013
Lab: A
Tested By: Kyle Fujimoto

Transmit Mode - Maximum Power
Test Distance: 10 Meters (Except Where Noted in Comments)
Corrected Spec Limit at 10 Meters for Harmonics = [40 Log (spec test dist./actual test dist.)] + spec limit
Corrected Spec Limit at 10 Meters for Fundamental = [(P*20) Log (spec test dist./actual test dist.)] + spec limit

Freq. (kHz)	Level (dBuV)	Pol (v/h)	Spec Limit (at 10 Meters)	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
58.2	115	V	--	--	Peak	1	90	Actual Reading @ 10m
58.2	104.8	V	--	--	Peak	1	90	Actual Reading @ 15m
58.2	115	V	117.86	-2.8606	Peak	1	90	Actual Reading @ 10m
								Corrected using (P*20)
116.4	74.5	V	85.37	-10.87	Peak	1	90	
174.6	72.6	V	81.85	-9.2482	Peak	1	90	
232.8	60.4	V	79.35	-18.949	Peak	1	90	
291	54.4	V	77.41	-23.011	Peak	1	90	
349.2	58.2	V	75.83	-17.628	Peak	1	90	
407.4	54.2	V	74.49	-20.289	Peak	1	90	
465.6	51.5	V	73.33	-21.829	Peak	1	90	
523.8	45.8	V	52.31	-6.5058	Peak	1	90	
582	47.3	V	51.39	-4.0906	Peak	1	90	

Limit in uV/m = 2400/F (kHz) at 300 Meters from 9 kHz to 490 kHz
Limit in uV/m = 24000/F (kHz) at 30 Meters from 490 kHz to 1705 kHz
Limit in uV/m = 30 at 30 Meters from 1705 kHz to 30 MHz

dBuV/m = 20 Log (uV/m)

Distance Correction Factor for Fundamental = [(P*20) log (Test Distance / 300)]
Where P is the roll-off exponent. P is found as follows:
P = (Level (at 10 Meters) - Level (at 2nd Test Distance)) / 20 Log (2nd Test Distance / 10 Meters)
@ 15 Meters - P =[(115-104.8) / 20 Log (15/10)] = 2.896

FCC 15.209

American Security spol. s r.o.
AM 58 kHz System
Model: AS-CU6

Date: 07/22/2013
Lab: A
Tested By: Kyle Fujimoto

Transmit Mode - Maximum Power
Test Distance: 10 Meters

Corrected Spec Limit at 10 Meters for Harmonics = [40 Log (spec test dist./actual test dist.)] + spec limit
Corrected Spec Limit at 10 Meters for Fundamental = [(P*20) Log (spec test dist./actual test dist.)] + spec limit

Freq. (kHz)	Level (dBuV)	Pol (v/h)	Spec Limit (at 10 Meters)	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
58.2	104.5	H	--	--	Peak	1	135	Actual Reading @ 10m
58.2	96	H	--	--	Peak	1	135	Actual Reading @ 15m
58.2	104.5	H	103.61	0.89359	Peak	1	135	Actual Reading @ 10m
								Corrected using (P*20)
58.2	89.7	H	103.61	-13.906	Avg	1	135	Actual Reading @ 10m
								Corrected using (P*20)
116.4	55.7	H	85.37	-29.67	Peak	1	180	
174.6	62.7	H	81.85	-19.148	Peak	1	135	
232.8	58.4	H	79.35	-20.949	Peak	1	135	
291	58.6	H	77.41	-18.811	Peak	1	135	
349.2	56.8	H	75.83	-19.028	Peak	1	135	
407.4	55.9	H	74.49	-18.589	Peak	1	90	
465.6	56	H	73.33	-17.329	Peak	1	90	
523.8	49.2	H	52.31	-3.1058	Peak	1	90	
582	47.3	H	51.39	-4.0906	Peak	1	90	
								Average Based On Duty Cycle of 2 mSec Pulse per 11 mSec Cycle

Limit in uV/m = 2400/F (kHz) at 300 Meters from 9 kHz to 490 kHz
Limit in uV/m = 24000/F (kHz) at 30 Meters from 490 kHz to 1705 kHz
Limit in uV/m = 30 at 30 Meters from 1705 kHz to 30 MHz

dBuV/m = 20 Log (uV/m)

Distance Correction Factor for Fundamental = [(P*20) log (Test Distance / 300)]
Where P is the roll-off exponent. P is found as follows:
P = (Level (at 10 Meters) - Level (at 2nd Test Distance)) / 20 Log (2nd Test Distance / 10 Meters)
@ 15 Meters - P =[(104.5-96.00) / 20 Log (15/10)] = 2.4135

FCC 15.209
American Security spol. s r.o.
AM 58 kHz System
Model: AS-CU6

Date: 07/22/2013
Lab: A
Tested By: Kyle Fujimoto

Transmit Mode - Minimum Power
Test Distance: 10 Meters
Corrected Spec Limit at 10 Meters = [40 Log (spec test dist./actual test dist.)] + spec limit

Freq. (kHz)	Level (dBuV)	Pol (v/h)	Spec Limit (at 10 Meters)	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
58.2	50.6	V	91.39	-40.791	Peak	1	135	
116.4	54.1	V	85.37	-31.27	Peak	1	90	
174.6	63.3	V	81.85	-18.548	Peak	1	90	
232.8	55.2	V	79.35	-24.149	Peak	1	90	
291	50.2	V	77.41	-27.211	Peak	1	90	
349.2	49.8	V	75.83	-26.028	Peak	1	90	
407.4	48.2	V	74.49	-26.289	Peak	1	90	
465.6	47.3	V	73.33	-26.029	Peak	1	90	
523.8	44.9	V	52.31	-7.4058	Peak	1	90	
582	49.7	V	51.39	-1.6906	Peak	1	90	

Limit in uV/m = 2400/F (kHz) at 300 Meters from 9 kHz to 490 kHz
Limit in uV/m = 24000/F (kHz) at 30 Meters from 490 kHz to 1705 kHz
Limit in uV/m = 30 at 30 Meters from 1705 kHz to 30 MHz

dBuV/m = 20 Log (uV/m)

FCC 15.209

American Security spol. s r.o.
AM 58 kHz System
Model: AS-CU6

Date: 07/22/2013
Lab: A
Tested By: Kyle Fujimoto

Transmit Mode - Minimum Power
Test Distance: 10 Meters
Corrected Spec Limit at 10 Meters = [40 Log (spec test dist./actual test dist.)] + spec limit

Freq. (kHz)	Level (dBuV)	Pol (v/h)	Spec Limit (at 10 Meters)	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
58.2	51.8	H	91.39	-39.591	Peak	1	90	
116.4	43.1	H	85.37	-42.27	Peak	1	90	
174.6	55.6	H	81.85	-26.248	Peak	1	90	
232.8	53.6	H	79.35	-25.749	Peak	1	90	
291	52.5	H	77.41	-24.911	Peak	1	90	
349.2	49.8	H	75.83	-26.028	Peak	1	90	
407.4	47.4	H	74.49	-27.089	Peak	1	90	
465.6	45.2	H	73.33	-28.129	Peak	1	90	
523.8	48.1	H	52.31	-4.2058	Peak	1	90	
582	47.2	H	51.39	-4.1906	Peak	1	90	

Limit in uV/m = 2400/F (kHz) at 300 Meters from 9 kHz to 490 kHz
Limit in uV/m = 24000/F (kHz) at 30 Meters from 490 kHz to 1705 kHz
Limit in uV/m = 30 at 30 Meters from 1705 kHz to 30 MHz

dBuV/m = 20 Log (uV/m)

Test Location : Compatible Electronics
Customer : American Security spol. s r.o.
Manufacturer : American Security spol. s r.o.
Eut name : AM 58 kHz System
Model : AS-CU6
Serial # : N/A
Specification : FCC A

Page : 1/2
Date : 07 / 23 / 2013
Time: 08:35:40 AM
Lab: A
Test Distance : 10.00

Distance correction factor (20 * log(test/spec)) : 0.00

Test Mode : Test Type: Spurious Emissions Qualification Scan
Test Range: 30 MHz to 1 GHz (Horizontal and Vertical)
FCC Class A - Maximum Power
Test Engineer: Alex Benitez

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
1V	49.158	51.80	1.08	17.00	33.10	36.79	39.08	-2.29
2V	49.159Qp	49.48	1.08	17.00	33.10	34.47	39.08	-4.61
3V	63.392	58.90	1.23	10.74	33.07	37.80	39.08	-1.28
4V	63.392Qp	54.99	1.23	10.74	33.07	33.89	39.08	-5.19
5H	72.984	50.40	1.36	6.43	33.00	25.19	39.08	-13.89
6V	79.719	58.10	1.49	4.48	33.00	31.08	39.08	-8.00
7V	112.503	58.40	1.70	9.86	33.00	36.96	43.52	-6.56
8H	122.875	47.40	1.78	10.56	33.00	26.74	43.52	-16.78
9V	123.979	53.30	1.79	10.58	33.00	32.67	43.52	-10.85
10V	133.114	45.20	1.90	9.52	33.00	23.62	43.52	-19.90
11H	145.413	48.30	2.04	10.01	33.00	27.35	43.52	-16.17
12H	147.478	49.30	2.07	10.54	33.00	28.91	43.52	-14.61
13V	171.633	56.40	2.27	9.44	32.91	35.20	43.52	-8.32
14V	174.326	55.50	2.29	9.57	32.90	34.46	43.52	-9.06
15V	181.174	52.60	2.35	8.54	32.88	30.61	43.52	-12.91
16H	199.986	62.70	2.50	9.10	32.80	41.50	43.52	-2.02
17H	199.986Qp	62.22	2.50	9.10	32.80	41.02	43.52	-2.50
18V	200.006	63.40	2.50	9.10	32.80	42.20	43.52	-1.32
19V	200.006Qp	62.52	2.50	9.10	32.80	41.32	43.52	-2.20
20H	224.984	47.90	2.80	10.25	32.34	28.61	46.44	-17.83
21V	228.824	54.60	2.83	10.43	32.34	35.52	46.44	-10.92
22H	228.868	48.70	2.83	10.43	32.34	29.62	46.44	-16.82
23V	249.999	51.80	3.00	11.40	32.32	33.88	46.44	-12.56
24H	250.027	53.70	3.00	11.40	32.32	35.78	46.44	-10.66
25V	266.983	51.30	3.14	11.57	32.29	33.71	46.44	-12.73
26H	267.001	51.20	3.14	11.57	32.29	33.61	46.44	-12.83
27H	299.999	54.60	3.40	11.90	32.26	37.64	46.44	-8.80
28V	300.005	55.10	3.40	11.90	32.26	38.14	46.44	-8.30
29V	319.990	53.10	3.60	12.82	32.25	37.27	46.44	-9.17
30H	350.017	48.80	3.90	14.20	32.23	34.67	46.44	-11.77
31H	399.979	52.50	4.20	15.20	32.17	39.73	46.44	-6.71
32H	449.983	44.90	4.60	16.50	32.16	33.84	46.44	-12.60
33H	649.995	44.30	6.30	19.10	31.97	37.73	46.44	-8.71
34H	849.999	40.80	7.90	21.70	31.57	38.83	46.44	-7.61
35H	899.984	45.50	8.10	22.70	31.43	44.87	46.44	-1.57

Test Location : Compatible Electronics **Page :** 2/2
Customer : American Security spol. s r.o. **Date :** 07 / 23 / 2013
Manufacturer : American Security spol. s r.o. **Time:** 08:35:40 AM
Eut name : 58 kHz Acoustic Magnetic System **Lab:** A
Model : AS-CU6 **Test Distance :** 10.00
Serial # : N/A
Specification : FCC A
Distance correction factor (20 * log(test/spec)) : 0.00
Test Mode : Test Type: Spurious Emissions Qualification Scan
Test Range: 30 MHz to 1 GHz (Horizontal and Vertical)
FCC Class A - Maximum Power
Test Engineer: Alex Benitez

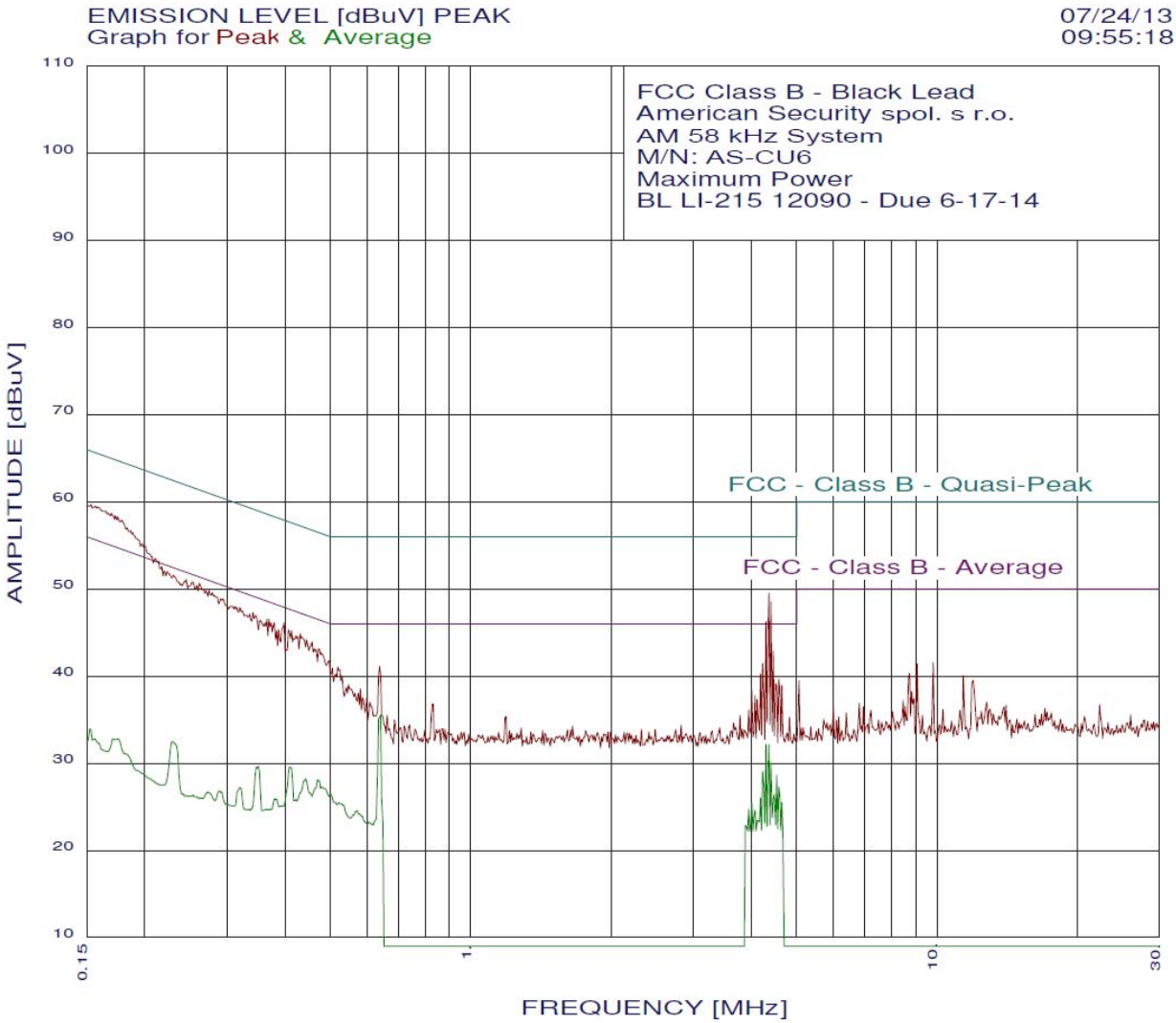
Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
36H	899.984Qp	43.89	8.10	22.70	31.43	43.26	46.44	-3.18
37V	949.978	40.70	8.30	22.10	31.29	39.81	46.44	-6.63

Test Location : Compatible Electronics **Page :** 1/2
Customer : American Security spol. s r.o. **Date :** 07 / 23 / 2013
Manufacturer : American Security spol. s r.o. **Time:** 01:00:08 PM
Eut name : AM 58 kHz System **Lab:** A
Model : AS-CU6 **Test Distance :** 10.00
Serial # : N/A
Specification : FCC A
Distance correction factor (20 * log(test/spec)) : 0.00
Test Mode : Test Type: Spurious Emissions Qualification Scan
Test Range: 30 MHz to 1 GHz (Horizontal and Vertical)
FCC Class A - Minimum Power
Test Engineer: Alex Benitez

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
1V	36.890	52.20	0.74	19.33	33.01	39.26	39.08	0.18
2V	36.890Qp	49.29	0.74	19.33	33.01	36.35	39.08	-2.73
3V	49.134Qp	50.26	1.08	17.01	33.10	35.25	39.08	-3.83
4V	49.134	51.40	1.08	17.01	33.10	36.39	39.08	-2.69
5V	57.215	55.50	1.17	13.70	33.10	37.27	39.08	-1.81
6V	57.215Qp	53.96	1.17	13.70	33.10	35.73	39.08	-3.35
7V	65.058	60.30	1.25	9.87	33.05	38.37	39.08	-0.71
8V	65.058Qp	55.54	1.25	9.87	33.05	33.61	39.08	-5.47
9V	81.214	54.70	1.50	4.84	33.01	28.02	39.08	-11.06
10H	85.827	49.60	1.50	6.50	33.06	24.54	39.08	-14.54
11V	112.530	59.50	1.70	9.87	33.00	38.07	43.52	-5.45
12V	123.961	55.80	1.79	10.58	33.00	35.17	43.52	-8.35
13H	133.278	54.00	1.90	9.50	33.00	32.40	43.52	-11.12
14H	147.431	49.30	2.07	10.53	33.00	28.90	43.52	-14.62
15H	149.997	50.10	2.10	11.20	33.00	30.40	43.52	-13.12
16H	171.650	48.60	2.27	9.44	32.91	27.40	43.52	-16.12
17V	171.850	52.00	2.27	9.45	32.91	30.82	43.52	-12.70
18V	174.310	55.20	2.29	9.57	32.90	34.16	43.52	-9.36
19V	181.164	50.60	2.35	8.53	32.88	28.61	43.52	-14.91
20V	184.316	46.00	2.37	8.63	32.86	24.14	43.52	-19.38
21V	186.324	55.30	2.39	8.69	32.85	33.53	43.52	-9.99
22V	199.978	64.10	2.50	9.10	32.80	42.90	43.52	-0.62
23V	199.978Qp	63.15	2.50	9.10	32.80	41.95	43.52	-1.57
24H	199.994	62.90	2.50	9.10	32.80	41.70	43.52	-1.82
25H	199.994Qp	62.33	2.50	9.10	32.80	41.13	43.52	-2.39
26V	219.324	51.10	2.73	9.99	32.44	31.38	46.44	-15.06
27H	219.991	48.80	2.74	10.02	32.43	29.13	46.44	-17.31
28H	228.818	49.70	2.83	10.43	32.34	30.62	46.44	-15.82
29V	228.843	53.90	2.83	10.43	32.34	34.82	46.44	-11.62
30H	240.004	52.40	2.92	10.94	32.33	33.93	46.44	-12.51
31H	249.982	53.60	3.00	11.40	32.32	35.68	46.44	-10.76
32V	249.989	52.60	3.00	11.40	32.32	34.68	46.44	-11.76
33H	267.016	47.60	3.14	11.57	32.29	30.01	46.44	-16.43
34H	300.006	54.50	3.40	11.90	32.26	37.54	46.44	-8.90
35V	300.023	56.20	3.40	11.90	32.26	39.24	46.44	-7.20

Test Location : Compatible Electronics **Page :** 2/2
Customer : American Security spol. s r.o. **Date :** 07 / 23 / 2013
Manufacturer : American Security spol. s r.o. **Time:** 01:00:08 PM
Eut name : AM 58 kHz System **Lab:** A
Model : AS-CU6 **Test Distance :** 10.00
Serial # : N/A
Specification : FCC A
Distance correction factor (20 * log(test/spec)) : 0.00
Test Mode : Test Type: Spurious Emissions Qualification Scan
Test Range: 30 MHz to 1 GHz (Horizontal and Vertical)
FCC Class A - Minimum Power
Test Engineer: Alex Benitez

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
36H	349.994	48.60	3.90	14.20	32.23	34.47	46.44	-11.97
37V	350.015	47.90	3.90	14.20	32.23	33.77	46.44	-12.67
38V	399.988	52.10	4.20	15.20	32.17	39.33	46.44	-7.11
39H	399.988	54.90	4.20	15.20	32.17	42.13	46.44	-4.31
40H	449.980	43.90	4.60	16.50	32.16	32.84	46.44	-13.60
41V	450.012	50.70	4.60	16.50	32.16	39.64	46.44	-6.80
42H	549.978	41.00	5.60	16.20	32.07	30.73	46.44	-15.71
43H	554.322	54.50	5.64	16.33	32.07	44.41	46.44	-2.03
44H	554.322Qp	50.95	5.64	16.33	32.07	40.86	46.44	-5.58
45V	554.335	54.90	5.64	16.33	32.07	44.81	46.44	-1.63
46V	554.335Qp	52.99	5.64	16.33	32.07	42.90	46.44	-3.54
47V	560.331	57.60	5.70	16.51	32.06	47.75	46.44	1.31
48V	560.331Qp	55.30	5.70	16.51	32.06	45.45	46.44	-0.99
49H	649.980	42.40	6.30	19.10	31.97	35.83	46.44	-10.61
50H	700.013	40.10	6.60	20.00	31.87	34.83	46.44	-11.61
51V	800.002	40.30	7.20	21.50	31.73	37.27	46.44	-9.17
52H	899.974	44.70	8.10	22.70	31.43	44.07	46.44	-2.37
53H	950.006	42.40	8.30	22.10	31.29	41.51	46.44	-4.93
54H	999.999	41.10	8.70	22.90	31.14	41.56	49.54	-7.98


EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average
07/24/13
09:55:18
FCC Class B - Black Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Maximum Power
BL LI-215 12090 - Due 6-17-14
FCC - Class B - Quasi-Peak
FCC - Class B - Average
AMPLITUDE [dBuV]
110
100
90
80
70
60
50
40
30
20
10
0.15
1
10
30
FREQUENCY [MHz]

page 1/1

07/24/13 09:55:18

FCC Class B - Black Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Maximum Power
BL LI-215 12090 - Due 6-17-14
Test Engineer : Alex Benitez

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30 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	4.361	49.52	46.00	3.52**
2	4.408	48.52	46.00	2.52**
3	4.294	46.22	46.00	0.22**
4	0.398	46.11	47.90	-1.79**
5	0.341	47.29	49.18	-1.88**
6	0.369	46.50	48.52	-2.01**
7	0.365	46.50	48.61	-2.10**
8	0.379	46.10	48.29	-2.19**
9	0.406	45.31	47.72	-2.41**
10	0.431	44.82	47.24	-2.41**
11	0.387	45.30	48.12	-2.81**
12	0.457	43.93	46.76	-2.82**
13	0.383	45.20	48.21	-3.00**
14	4.456	42.83	46.00	-3.17**
15	0.471	43.13	46.49	-3.36**
16	4.227	41.41	46.00	-4.59**
17	0.637	41.10	46.00	-4.90**
18	0.518	41.03	46.00	-4.97**
19	4.182	40.21	46.00	-5.79**
20	4.576	39.63	46.00	-6.37**
21	4.504	39.13	46.00	-6.87**
22	0.547	39.02	46.00	-6.98**
23	4.648	38.94	46.00	-7.06**
24	0.580	38.51	46.00	-7.49**
25	4.008	38.41	46.00	-7.59**
26	4.071	37.71	46.00	-8.29**
27	0.586	37.51	46.00	-8.49**
28	0.598	37.51	46.00	-8.49**
29	9.813	41.51	50.00	-8.49
30	9.065	41.40	50.00	-8.60

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page 1/1

07/24/13 09:55:18

FCC Class B - Black Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Maximum Power
BL LI-215 12090 - Due 6-17-14
Test Engineer : Alex Benitez

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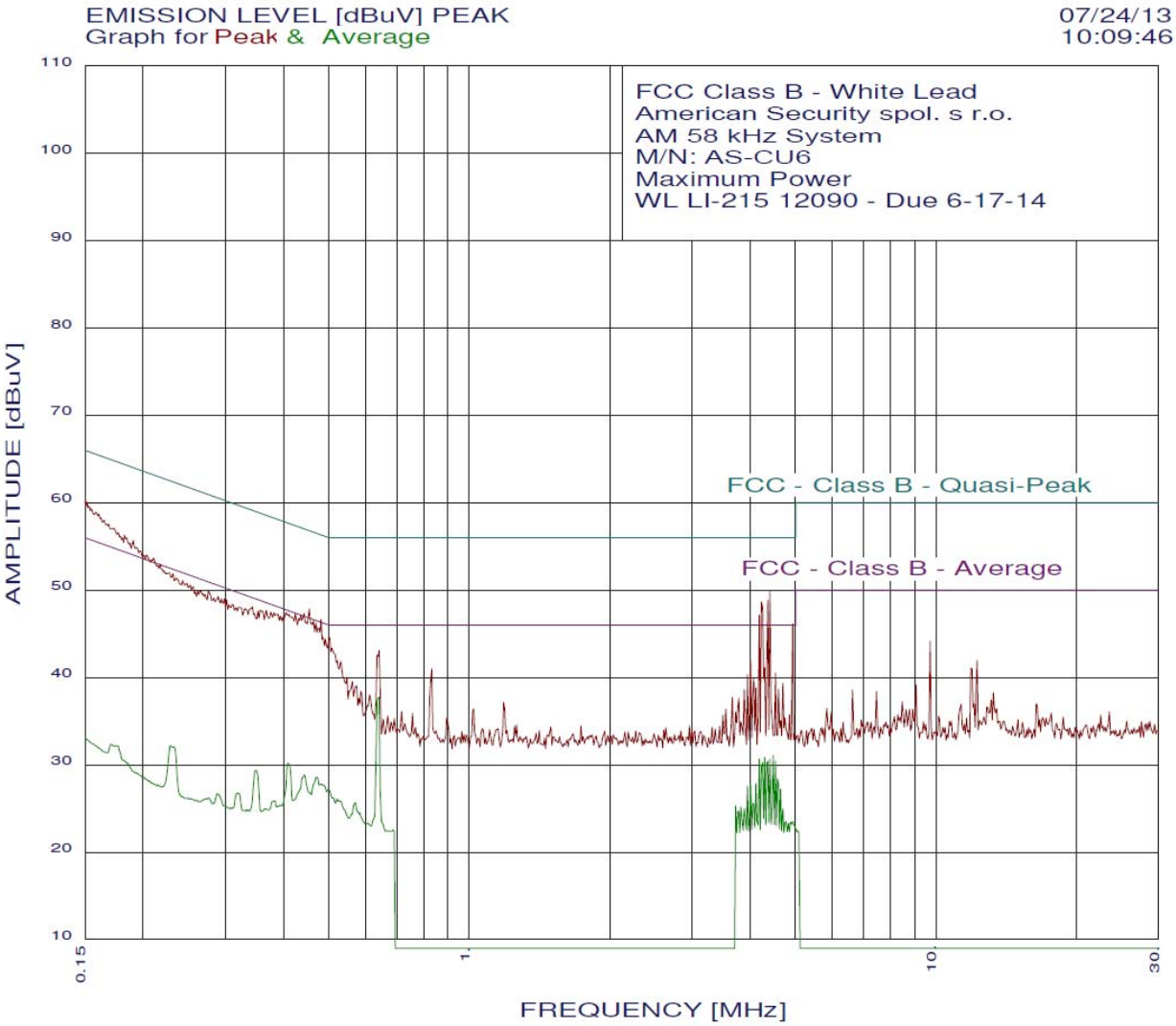
22 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.641	35.55	46.00	-10.45
2	4.361	32.14	46.00	-13.86
3	4.294	32.14	46.00	-13.86
4	4.408	29.98	46.00	-16.02
5	4.227	29.01	46.00	-16.99
6	4.528	28.60	46.00	-17.40
7	0.409	29.56	47.68	-18.12
8	0.469	28.11	46.53	-18.42
9	4.576	27.27	46.00	-18.73
10	0.442	28.19	47.02	-18.83
11	0.350	29.62	48.95	-19.34
12	4.480	26.44	46.00	-19.56
13	0.229	32.48	52.48	-20.00
14	4.182	26.00	46.00	-20.00
15	4.648	25.53	46.00	-20.47
16	4.008	25.50	46.00	-20.50
17	3.945	24.72	46.00	-21.28
18	4.071	24.61	46.00	-21.39
19	0.152	33.96	55.86	-21.90
20	0.175	32.82	54.72	-21.90
21	0.320	27.22	49.71	-22.49
22	0.290	26.84	50.54	-23.70


EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average
07/24/13
10:09:46
FCC Class B - White Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Maximum Power
WL LI-215 12090 - Due 6-17-14
FCC - Class B - Quasi-Peak
FCC - Class B - Average
AMPLITUDE [dBuV]
110
100
90
80
70
60
50
40
30
20
10
0.15
1
10
30
FREQUENCY [MHz]

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07/24/13 10:09:46

FCC Class B - White Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Maximum Power
WL LI-215 12090 - Due 6-17-14
Test Engineer : Alex Benitez

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30 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	4.408	49.93	46.00	3.93**
2	4.361	48.83	46.00	2.83**
3	4.227	48.62	46.00	2.62**
4	4.182	47.12	46.00	1.12**
5	0.454	47.82	46.80	1.02**
6	0.481	46.63	46.32	0.32**
7	0.442	47.32	47.02	0.30**
8	4.928	46.14	46.00	0.14**
9	0.469	46.23	46.53	-0.30**
10	0.404	47.41	47.77	-0.36**
11	0.367	47.69	48.56	-0.87**
12	0.343	48.08	49.13	-1.05**
13	0.356	47.68	48.82	-1.14**
14	0.502	44.54	46.00	-1.46**
15	0.641	43.10	46.00	-2.90**
16	4.008	42.02	46.00	-3.98**
17	4.294	41.13	46.00	-4.87**
18	0.831	40.96	46.00	-5.04
19	4.528	40.53	46.00	-5.47**
20	3.945	40.31	46.00	-5.69**
21	9.711	44.14	50.00	-5.86
22	4.071	39.82	46.00	-6.18**
23	0.561	39.52	46.00	-6.48**
24	4.696	39.33	46.00	-6.67**
25	0.573	39.02	46.00	-6.98**
26	4.114	38.82	46.00	-7.18**
27	4.600	38.63	46.00	-7.37**
28	3.882	38.61	46.00	-7.39**
29	0.586	38.41	46.00	-7.59**
30	0.611	38.01	46.00	-7.99**

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FCC Class B - White Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Maximum Power
WL LI-215 12090 - Due 6-17-14
Test Engineer : Alex Benitez

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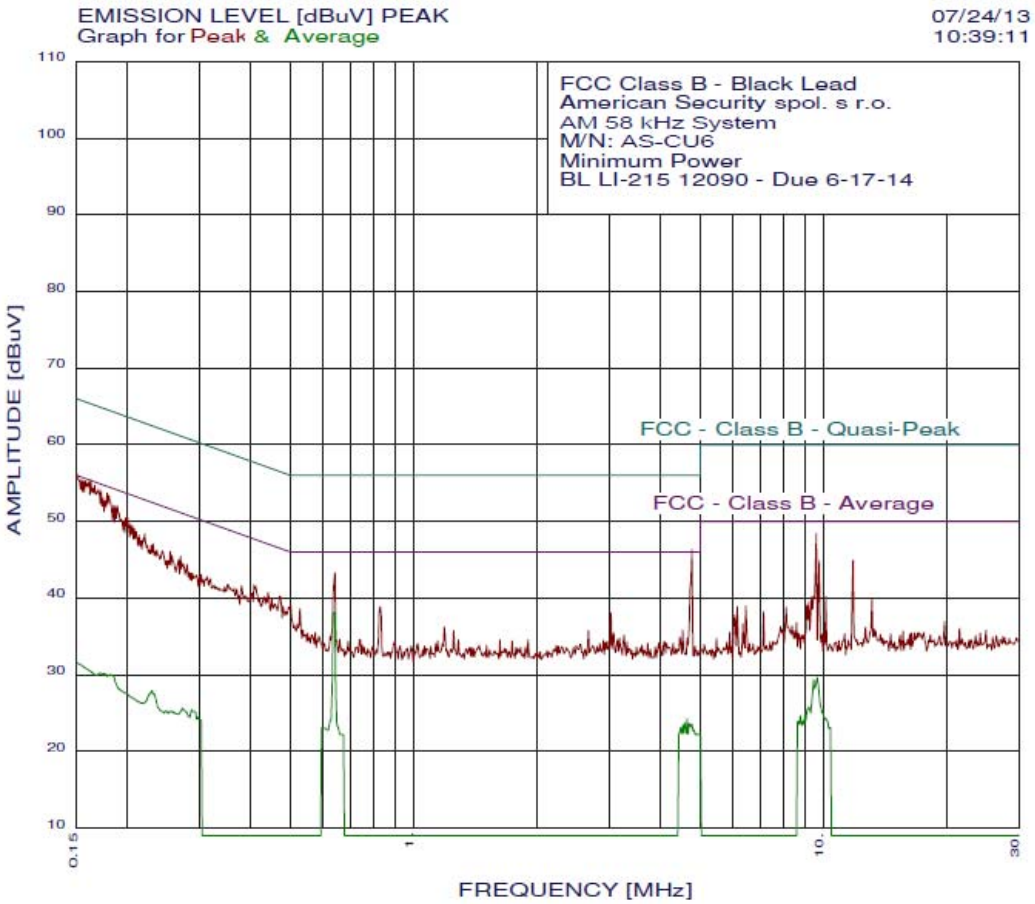
29 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.641	37.73	46.00	-8.27
2	4.480	31.11	46.00	-14.89
3	4.294	30.83	46.00	-15.17
4	4.182	30.67	46.00	-15.33
5	4.408	30.62	46.00	-15.38
6	4.528	30.42	46.00	-15.58
7	4.361	30.39	46.00	-15.61
8	4.249	30.22	46.00	-15.78
9	0.409	30.18	47.68	-17.50
10	4.576	28.40	46.00	-17.60
11	0.471	28.56	46.49	-17.93
12	4.114	27.84	46.00	-18.16
13	4.008	27.84	46.00	-18.16
14	0.442	28.82	47.02	-18.20
15	3.945	27.57	46.00	-18.43
16	4.648	27.22	46.00	-18.78
17	0.348	29.38	49.00	-19.62
18	0.229	32.17	52.48	-20.31
19	0.570	25.63	46.00	-20.37
20	4.050	25.57	46.00	-20.43
21	3.722	25.27	46.00	-20.73
22	3.820	25.16	46.00	-20.84
23	3.882	24.98	46.00	-21.02
24	4.696	24.94	46.00	-21.06
25	3.781	24.73	46.00	-21.27
26	4.928	23.50	46.00	-22.50
27	4.774	23.49	46.00	-22.51
28	0.320	26.74	49.71	-22.97
29	0.288	26.68	50.58	-23.90


EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average
07/24/13
10:39:11
FCC Class B - Black Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Minimum Power
BL LI-215 12090 - Due 6-17-14
FCC - Class B - Quasi-Peak
FCC - Class B - Average
AMPLITUDE [dBuV]
110
100
90
80
70
60
50
40
30
20
10
0.15
1
10
30
FREQUENCY [MHz]

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07/24/13 10:39:11

FCC Class B - Black Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Minimum Power
BL LI-215 12090 - Due 6-17-14
Test Engineer : Alex Benitez

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30 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	4.774	46.34	46.00	0.34**
2	0.162	55.39	55.34	0.05**
3	0.154	55.49	55.78	-0.29**
4	0.157	55.29	55.60	-0.31**
5	0.156	55.29	55.69	-0.40**
6	0.172	53.99	54.86	-0.87**
7	0.178	53.68	54.59	-0.90**
8	0.180	53.38	54.50	-1.12**
9	9.608	48.41	50.00	-1.59**
10	0.188	51.98	54.10	-2.12**
11	0.184	52.08	54.28	-2.20**
12	0.186	51.98	54.19	-2.21**
13	0.641	43.30	46.00	-2.70**
14	0.200	50.58	53.62	-3.04**
15	0.198	50.48	53.71	-3.23**
16	0.203	49.68	53.49	-3.81**
17	0.196	49.98	53.80	-3.82**
18	0.205	49.48	53.40	-3.92**
19	0.207	49.08	53.31	-4.23**
20	0.220	48.38	52.83	-4.45**
21	0.213	48.18	53.09	-4.91**
22	11.814	44.92	50.00	-5.08
23	9.762	44.91	50.00	-5.09**
24	0.230	47.07	52.43	-5.36**
25	0.254	46.07	51.64	-5.57**
26	0.228	46.87	52.52	-5.65**
27	0.269	45.47	51.15	-5.68**
28	0.243	46.17	52.00	-5.83**
29	0.256	45.57	51.55	-5.98**
30	0.406	41.71	47.72	-6.01

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FCC Class B - Black Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Minimum Power
BL LI-215 12090 - Due 6-17-14
Test Engineer : Alex Benitez

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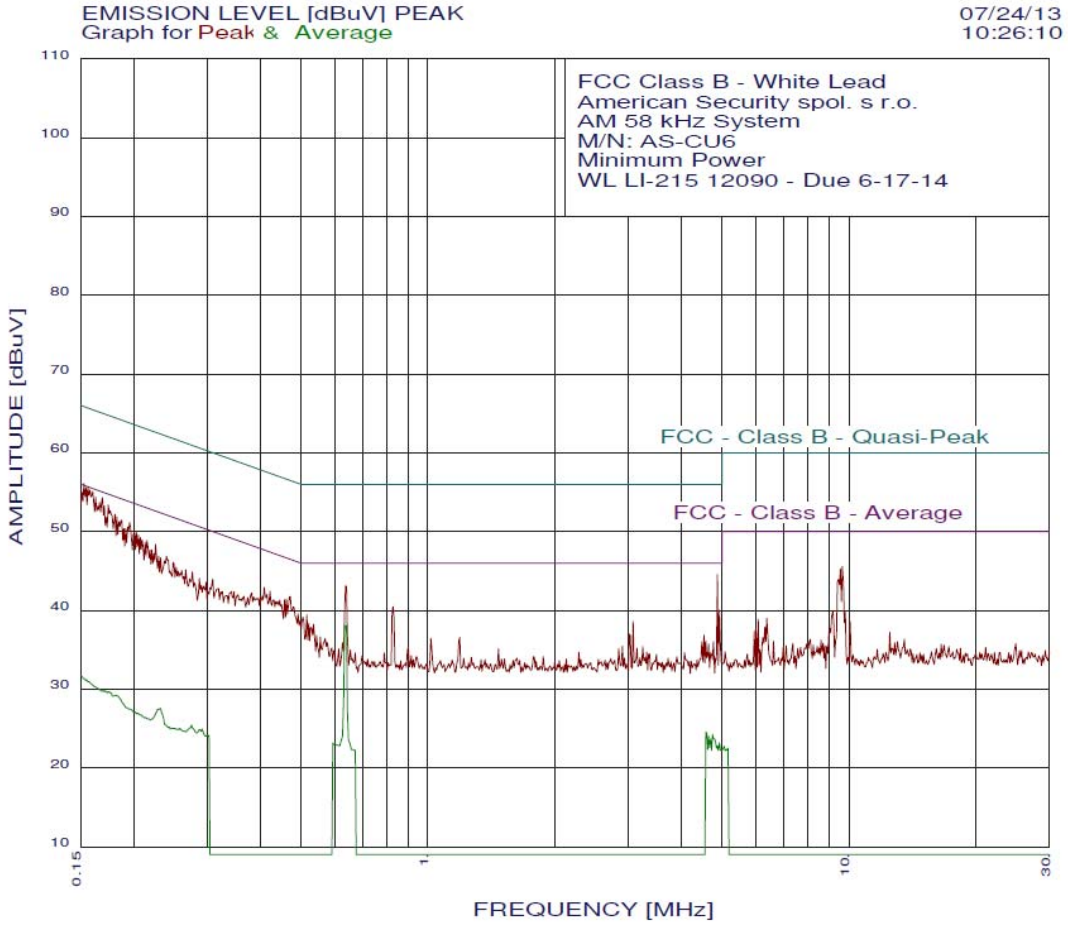
11 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.641	38.19	46.00	-7.81
2	9.660	29.62	50.00	-20.38
3	9.454	29.37	50.00	-20.63
4	4.648	24.25	46.00	-21.75
5	4.576	23.77	46.00	-22.23
6	4.774	23.57	46.00	-22.43
7	4.528	23.41	46.00	-22.59
8	0.229	27.92	52.48	-24.56
9	9.017	25.13	50.00	-24.87
10	0.286	25.42	50.63	-25.21
11	8.777	24.63	50.00	-25.37


EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average
07/24/13
10:26:10
FCC Class B - White Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Minimum Power
WL LI-215 12090 - Due 6-17-14
FCC - Class B - Quasi-Peak
FCC - Class B - Average
AMPLITUDE [dBuV]
110
100
90
80
70
60
50
40
30
20
10
0.15
1
10
30
FREQUENCY [MHz]

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07/24/13 10:26:10

FCC Class B - White Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Minimum Power
WL LI-215 12090 - Due 6-17-14
Test Engineer : Alex Benitez

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30 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.152	56.09	55.86	0.22**
2	0.156	55.69	55.69	-0.00**
3	0.154	55.59	55.78	-0.19**
4	0.169	54.28	55.03	-0.75**
5	0.162	54.38	55.34	-0.95**
6	0.151	54.99	55.95	-0.97**
7	0.174	53.37	54.77	-1.39**
8	4.877	44.54	46.00	-1.46**
9	0.166	53.68	55.16	-1.48**
10	0.170	53.28	54.94	-1.66**
11	0.181	52.17	54.46	-2.29**
12	0.183	51.86	54.37	-2.51**
13	0.196	51.16	53.80	-2.64**
14	0.187	51.46	54.15	-2.69**
15	0.637	43.10	46.00	-2.90**
16	0.203	49.96	53.49	-3.53**
17	0.192	50.36	53.97	-3.61**
18	0.189	50.36	54.06	-3.70**
19	0.201	49.86	53.58	-3.72**
20	0.205	49.56	53.40	-3.84**
21	0.207	49.26	53.31	-4.05**
22	0.215	48.87	53.00	-4.14**
23	0.226	48.37	52.61	-4.24**
24	0.210	48.96	53.23	-4.26**
25	0.213	48.66	53.09	-4.43**
26	9.660	45.54	50.00	-4.46
27	0.471	41.73	46.49	-4.76
28	9.557	45.24	50.00	-4.76
29	0.409	42.91	47.68	-4.77
30	0.421	42.41	47.42	-5.00

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07/24/13 10:26:10

FCC Class B - White Lead
American Security spol. s r.o.
AM 58 kHz System
M/N: AS-CU6
Minimum Power
WL LI-215 12090 - Due 6-17-14
Test Engineer : Alex Benitez

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7 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.637	38.08	46.00	-7.92
2	4.576	24.56	46.00	-21.44
3	4.748	24.24	46.00	-21.76
4	4.648	24.04	46.00	-21.96
5	4.696	23.70	46.00	-22.30
6	4.928	23.20	46.00	-22.80
7	0.232	27.53	52.39	-24.86