

*FCC PART 15, SUBPART C &  
RSS-210 ISSUE 7 DATED JUNE 2007  
TEST REPORT*

*for*

ACCESS CONTROL SYSTEM  
M/N: RKDT-PPLX-COMBO (RKDT-SR)  
FCC ID: NNHDTR1

Prepared for

SECURA KEY  
20301 NORDOFF ST.  
CHATSWORTH, CA 91311

Prepared by: \_\_\_\_\_

REYNALD O. RAMIREZ

Approved by: \_\_\_\_\_

RUBY A. HALL

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DATE: MARCH 21, 2011

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

This electromagnetic emission report is generated by Compatible Electronics Inc., 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 in any form except in full, without the written permission of Compatible Electronics.

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

Device Tested: Access Control System  
Model Number: RKDT-PPLX-COMBO (RKDT-SR)  
SN: None

Product Description: This is a low frequency card reader.

Modifications: The EUT was not modified during the testing.

Manufacturer: Secura Key  
20301 Nordoff St.  
Chatsworth, CA 91311

Test Dates: Aug. 25, 2010 & Mar. 4, 2011

Test Specifications: EMI requirements  
FCC CFR Title 47, Part 15 Subpart A, B and C sections 15.31 (e), 15.109, 15.205, 15.207 & 15.209  
RSS-210 Issue 7 dated June 2007  
Test Procedure: ANSI C63.4: 2009.

**Industry Canada Lab Code 2154B**

## SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz - 30 MHz.	Complies with the limits of FCC CFR Title 47, Part 15 Subpart C 15.207. Highest Reading in relation to spec. limit: 50.50 dBuV/m @ 0.183 MHz (*u <sub>c</sub> = 0.42dB)
2	Radiated RF Emissions, 9 kHz – 1000 MHz.	Complies with the limits of FCC CFR Title 47, Part 15 Subpart C 15.205, 15.209 and RSS-210 Issue 7 dated June 2007 Highest Reading in relation to spec. limit: 30.13 dBuV/m @ 32.00 MHz (*u <sub>c</sub> = 2.09dB)

## **1. PURPOSE**

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Access Control System Model Number: RKDT-PPLX-COMBO (RKDT-SR). The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 2009. 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 specification limits defined in FCC CFR Title 47, Part 15 Subpart A (15.31e), Subpart B, 15.109 Subpart C 15.205, 15.207, 15.209 and RSS-210 Issue 7 dated June 2007.

## **2. ADMINISTRATIVE DATA**

### **2.1 Location of Testing**

The EMI tests described herein were performed at the test facility of Compatible Electronics, 2337 Troutdale Drive, Agoura, California 91301.

### **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**

Secura Key

Frank Tajbakhsh                      Senior Electronic Design Engineer

Compatible Electronics Inc.

Reynald O. Ramirez                      Sr. Test Engineer  
Ruby A. Hall                              Lab Manager

### **2.4 Date Test Sample was Received**

The test sample was received on Aug. 25, 2010.

### **2.5 Disposition of the Test Sample**

The test sample remains at Compatible Electronics Inc.

### **2.6 Abbreviations and Acronyms**

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

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network

### 3. APPLICABLE DOCUMENTS

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

SPEC	TITLE
FCC CFR Title 47, Part 15 Subpart C Subpart B  Subpart A	FCC Rules – Intentional Radiators.  FCC Rules - Unintentional Radiators  General
CISPR 16-1-4 2008	Specification for radio disturbance and immunity measuring apparatus and methods.
ANSI C63.4 2009	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz.
RSS-210 Issue 7 dated June 2007	General Requirements and Information for the Certification of Radiocommunication Equipment
ANSI C63.10 2009	American National Standard for Testing Unlicensed Wireless Devices.

## **4. DESCRIPTION OF TEST CONFIGURATION**

### **4.1 Description of Test Configuration - EMI**

The EUT was set-up in a tabletop configuration. The EUT was connected to a remotely located laptop via a serial cable. The EUT was turned on (DC power only) and continuously transmitting throughout the test. A laptop was used to monitor data transmission. The EUT transmitting antenna is a fixed element; which connects directly to the PCB board. The EUT tested was enclosed in a beige switch plate housing. The RKDT-PPLX-COMBO (RKDT-SR) was tested to a Wiegand, RS485, Smart Reader configuration. Other readers tested were the PPLX-Wiegand, TTL configuration, RKDT-SA-S –Wiegand, TTL, Stand Alone configuration and the AM-DPR (RKDT-W) – Wiegand, TTL, configuration.

The highest emissions were found when the EUT was running in the above configuration. The cable was moved to maximize the emissions. The final radiated and conducted data was taken in this mode of operation. All initial investigations were performed with the EMI Receiver in manual mode scanning the frequency range continuously. The cables were routed as shown in the photographs in Appendix D.

#### **4.1.1 Photograph of Test Configuration - EMI**

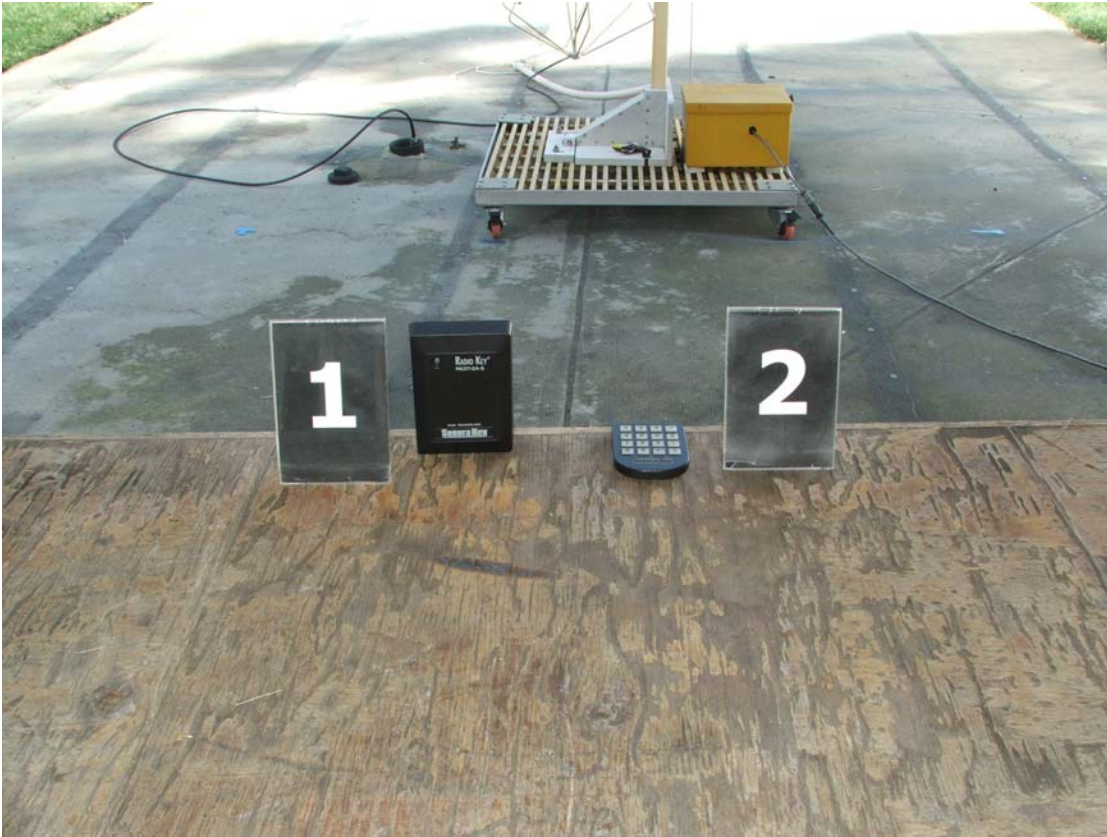




**4.1.2 Photograph of Test Configuration – EMI (continued)**



**4.1.3 Photograph of Test Configuration – EMI (continued)**



**4.1.4 Photograph of Test Configuration – EMI (continued)**



#### **4.1.5 Cable Construction and Termination**

##### Cable 1 (used for all configurations)

This is a 10 meter, unshielded, round, 12 pin cable that connects the EUT to the laptop. The cable has a 12 pin connector on one end and a serial connector on the other end.

**5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT****5.1 EUT and Accessory List**

#	EQUIPMENT TYPE	MANUFACTURER	MODEL	SERIAL NUMBER
1	ACCESS CONTROL SYSTEM (EUT)	SECURA KEY	RKDT-PPLX- COMBO (RKDT-SR)	S/N: NONE FCC ID: NNHDTR1
2	HAND HELD PROGRAMMER	SECURA KEY	NONE	NONE

**Accessory Room Equipment**

#	EQUIPMENT TYPE	MANUFACTURER	MODEL	SERIAL NUMBER
	(RADIATED) DC POWER SUPPLY	BK PRECISION	1670 DC POWER SUPPLY	NONE
	(CONDUCTED) AC ADAPTER	ITE POWER SUPPLY	MKD-41757000	NONE
	LAPTOP	FUJITSU	LIFEBOOK T SERIES	NONE

**Additional Models Tested**

#	EQUIPMENT TYPE	MANUFACTURER	MODEL	SERIAL NUMBER
	ACCESS CONTROL SYSTEM (EUT)	SECURA KEY	PPLX	S/N: NONE FCC ID: NNHDTR1
	ACCESS CONTROL SYSTEM (EUT)	SECURA KEY	RKDT-SA-S	S/N: NONE FCC ID: NNHDTR1
	ACCESS CONTROL SYSTEM (EUT)	SECURA KEY	AM-DPR/RKDT-W	S/N: NONE FCC ID: NNHDTR1

## 5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
EMI Receiver	Rohde & Schwarz	ESIB-40	100218	Apr. 09, 2009	Apr. 09, 2011
Preamplifier	Com Power	PA-103A	161244	Apr. 12, 2010	Apr. 12, 2011
Biconical Antenna	Com Power	AB-900	15283	Oct. 16, 2009	Oct. 16, 2010
Biconical Antenna	Com Power	AB-900	15283	Sep. 22, 2010	Sep. 22, 2011
Log Periodic Antenna	Com Power	AL-100	16200	Oct. 16, 2009	Oct. 16, 2010
Log Periodic Antenna	Com Power	AL-100	16200	Sep. 22, 2010	Sep. 22, 2011
EM Loop Antenna Active	Comp-Power	AL-130	17067	Sep. 29, 2009	Sep. 29, 2010
EM Loop Antenna Active	Comp-Power	AL-130	17067	Jan. 21, 2011	Jan. 21, 2012
Antenna Mast	Com Power	AM-400	N/A	N/A	N/A
Turntable	Com Power	TTW-595	N/A	N/A	N/A
Computer	Hewlett Packard	Pavilion 4530	US91912022	N/A	N/A
Printer	Hewlett Packard	C6427B	MY066160TW	N/A	N/A
EMI Application Software	Rohde & Schwarz	ESIB-K1	1.20	N/A	N/A
Hygrometer	Abbeon	HTAB169B	54897	Mar. 24, 2010	Mar. 24, 2012



## **6. TEST SITE DESCRIPTION**

### **6.1 Test Facility Description**

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

### **6.2 EUT Mounting, Bonding and Grounding**

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was not grounded.

## **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 RF Emissions**

#### **7.1.1 Conducted Emissions Test**

The EMI Receiver was used as a measuring meter. The data was collected with the EMI Receiver in the peak detect mode with the "Max Hold" feature activated. The quasi-peak or average was used only where indicated in the data sheets. A 10 dB attenuation pad was used for the protection of the EMI Receiver input stage, and the EMI Receiver offset was adjusted accordingly to read the actual data measured. The EMI Receiver read the LISN output. The output of the second LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for the conducted emissions 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 initial test data was taken in manual mode while scanning the frequency ranges of 0.15 MHz to 1.6 MHz, 1.6 MHz to 5 MHz and 5 MHz to 30 MHz. The conducted emissions from the EUT were maximized for operating mode as well as cable placement. Once a predominant frequency (within 12 dB of the limit) was found, it was more closely examined with the EMI Receiver span adjusted to 1 MHz.

The final data was collected under program control by the computer in several overlapping sweeps by running the EMI Receiver at a minimum scan rate of 10 seconds per octave. The six highest emissions are listed in table 1.



### 7.1.2 Radiated Emissions Test

The EMI Receiver was used as a measuring meter. A preamplifier was used to increase the sensitivity of the instrument. The EMI Receiver was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the EMI Receiver records the highest measured reading over all the sweeps. This final reading is then recorded automatically by the computer's automated data recording program, which takes into account the cable loss, amplifier gain and antenna factors, so that a true reading is compared to the true limit. The quasi-peak was used only for those readings, which are marked accordingly on the data sheets. The effective measurement bandwidth used for the radiated emissions test was (according to the frequency measured) 120 kHz for 30 MHz to 1 GHz and 1 MHz for 1 GHz and above.

Broadband Loop, Biconical, and log periodic antennas were used as transducers during the measurement. The Loop antenna was used from 9 KHz to 30 MHz, the biconical antenna was used from 30 MHz to 300 MHz and the log periodic antenna was used from 300 MHz to 1 GHz. The final data was taken with a frequency span of 1 MHz. Furthermore, the frequency span was reduced during the preliminary investigations as deemed necessary.

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to CISPR 16. 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 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 was tested at a 10 meter test distance to obtain final test data. The six highest emissions are listed in Table 2.

**7.1.3 RF Emissions Test Results**

Table 1.0 CONDUCTED EMISSION RESULTS 120VAC  
Access Control System Model: RKDT-PPLX-COMBO (RKDT-SR)

Frequency MHz	Emission Level* dBuV	Average Specification Limit dBuV	Delta (Spec limit-Emission) dB
0.164	51.10A	55.00	4.10
0.166	51.10A	55.00	4.10
0.169	51.10A	55.00	4.10
0.181	50.40A	54.00	4.00
0.183	50.50A	54.00	3.80
0.203	49.30A	54.00	4.20

Table 2.0 RADIATED EMISSION RESULTS  
Access Control System Model: RKDT-PPLX-COMBO (RKDT-SR)

Frequency MHz	Corrected Reading* dBuV	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
1.00	50.39	67.60	-17.21
32.00	30.13	40.00	-9.87
48.00	23.54	40.00	-16.46
140.86	28.04	43.52	-15.48
216.00	27.02	43.52	-16.50
399.99	31.07	31.70	-14.32

## Notes:

- \* The complete emissions data is given in Appendix E of this report.
- \*\* The factors for the antenna and preamplifier gain are attached in Appendix D of this report.
- # Quasi-Peak Reading
- A Average Reading

#### 7.1.4 Sample Calculations

A correction factor for the antenna, cable and a distance factor (if any) must be applied to the meter reading before a true field strength reading can be obtained. This Corrected Meter Reading is then compared to the specification limit in order to determine compliance with the limits.

The equation can be derived in the following manner:

Specification limit ( $\mu\text{V}/\text{m}$ )  $\log \times 20$  = Specification Limit in dBuV

(Specification distance / test distance)  $\log \times 40$  = distance factor

Note: When using an Active Antenna, the Antenna factor shall be subtracted due to the combination of the internal amplification and antenna loss. At lower frequencies the cable loss is negligible.

OR

Corrected Meter Reading = meter reading + F – A + C

where: F = antenna factor  
A = amplifier gain  
C = cable loss

The correction factors for the antenna and the amplifier gain are attached in Appendix D of this report. The data sheets are attached in Appendix E.

The distance factor D is 0 when the test is performed at the required specification distance.

#### Average Measurements

The frequencies that were averaged were done manually by narrowing the video filter down to 10 Hz and setting the sweep time to AUTO on the EMI Receiver to keep the amplitude reading calibrated.

**8. TEST PROCEDURE DEVIATIONS**

There were no deviations from the test procedures.

**9. CONCLUSIONS**

The Access Control System Model Number: RKDT-PPLX-COMBO (RKDT-SR) meets all of the requirements of the FCC CFR, Title 47, Part 15 Subpart A, Subpart B 15.109, Subpart C 15.205, 15.207, 15.209 and RSS-210 Issue 7 dated June 2007.

## **APPENDIX A**

### ***LABORATORY ACCREDITATIONS***

## LABORATORY ACCREDITATIONS AND RECOGNITIONS



For US, Canada, Australia/New Zealand, Taiwan and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025 an ISO 9002 equivalent. Please follow the link to the NIST site for each of our facilities NVLAP certificate and scope of accreditation.

### NVLAP listing links

Agoura Division - <http://ts.nist.gov/Standards/scopes/2000630.htm>

Brea Division - <http://ts.nist.gov/Standards/scopes/2005280.htm>

Silverado/Lake Forest Division - <http://ts.nist.gov/Standards/scopes/2005270.htm>



### ANSI listing

[CETCB](https://www.ansica.org/wwwversion2/outside/ALLdirectoryDetails.asp?menuID=1&prgID=3&orgID=123&status=4) <https://www.ansica.org/wwwversion2/outside/ALLdirectoryDetails.asp?menuID=1&prgID=3&orgID=123&status=4>



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



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).

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



### VCCI Listing, from VCCI site

[Enter "Compatible" in search form](http://www.vcci.or.jp/vcci_e/activity/registration/setsubi.html) [http://www.vcci.or.jp/vcci\\_e/activity/registration/setsubi.html](http://www.vcci.or.jp/vcci_e/activity/registration/setsubi.html)



### FCC Listing, from FCC OET site

[FCC test lab search](https://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm) <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**

There were no modifications made to the EUT during the test.



## **APPENDIX C**

### ***ADDITIONAL MODELS COVERED UNDER THIS REPORT***

## **ADDITIONAL MODELS COVERED UNDER THIS REPORT**

USED FOR THE PRIMARY TEST

ACCESS CONTROL SYSTEM

M/N: RKDT-PPLX-COMBO (RKDT-SR)

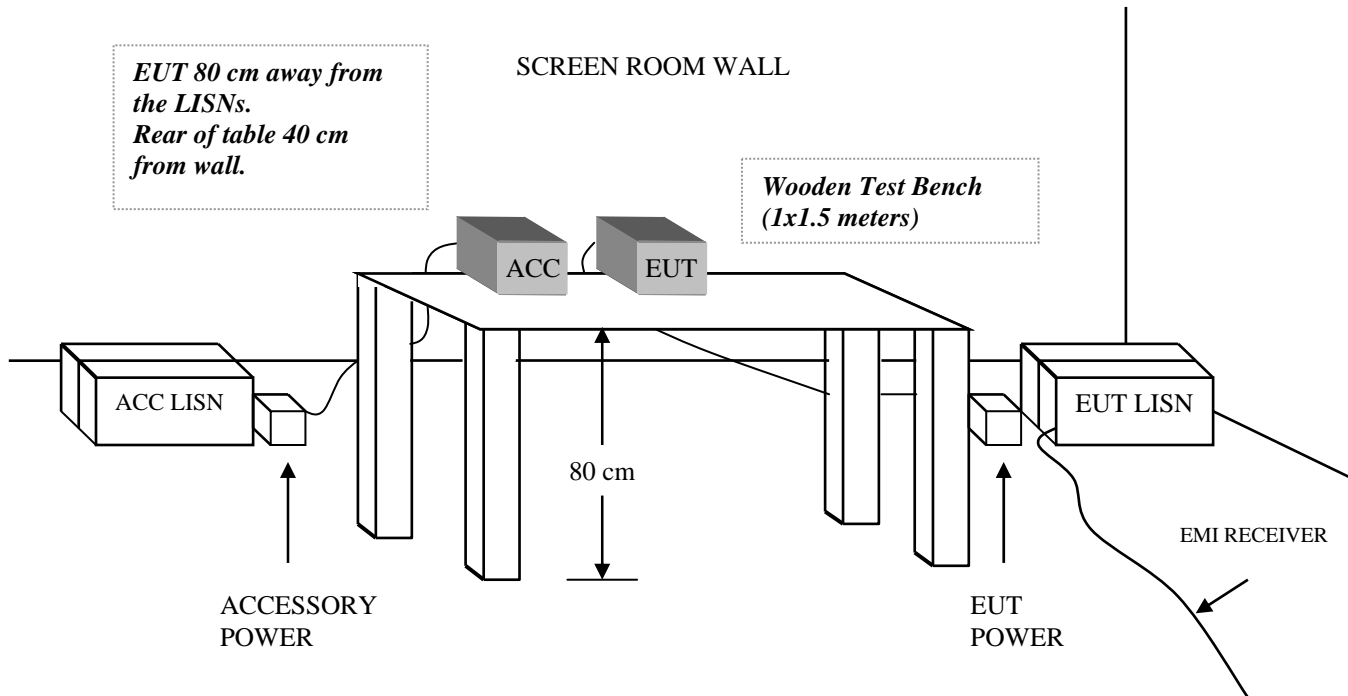
S/N: NONE

ADDITIONAL MODELS TESTED: PPLX, RKDT-SA-S & AM-DPR (RKDT-W)

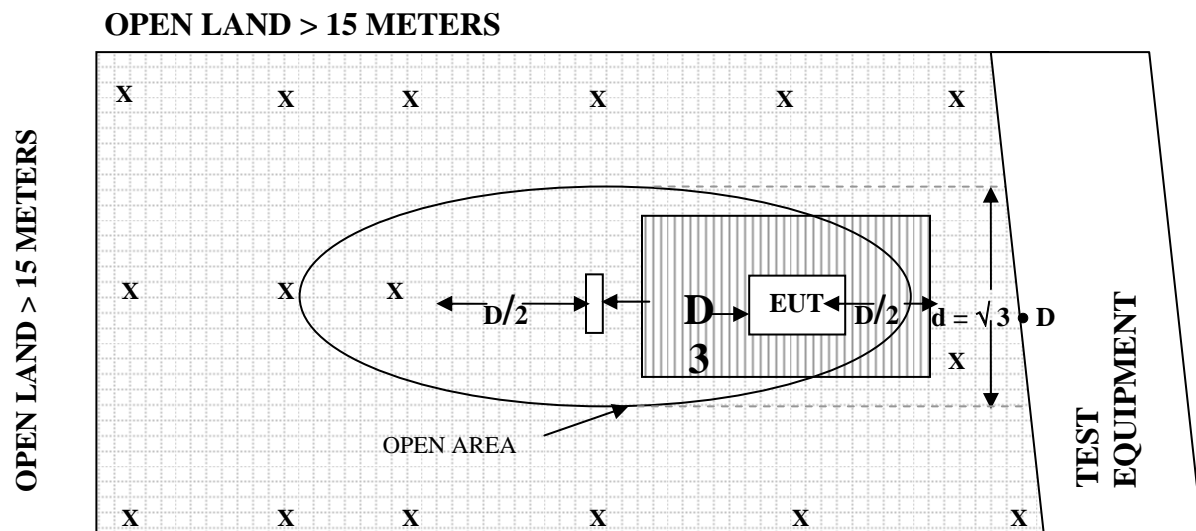
## **APPENDIX D**

### ***DIAGRAMS, CHARTS AND PHOTOS***

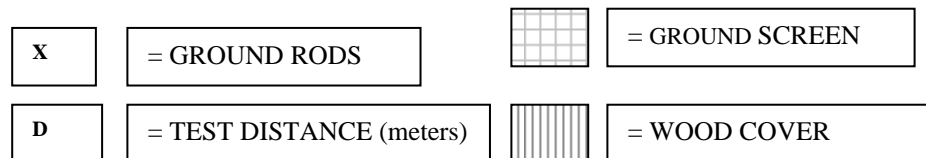
**FIGURE 1: CONDUCTED EMISSIONS TEST SETUP**



## FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE



### OPEN LAND > 15 METERS



COM-POWER AL-130  
ACTIVE LOOP ANTENNA

S/N: 17067

CALIBRATION DATE: SEPTEMBER 29, 2009

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
0.009	10.53	1	10.47
0.01	9.94	2	10.80
0.02	9.57	3	10.50
0.03	11.14	4	10.40
0.04	10.84	5	11.00
0.05	9.40	6	11.10
0.06	10.00	7	11.80
0.07	9.80	8	10.60
0.08	9.50	9	10.80
0.09	9.67	10	10.7
0.1	9.67	15	9.73
0.2	7.30	20	10.40
0.3	9.77	25	9.30
0.4	9.70	30	8.60
0.5	9.80		
0.6	10.17		
0.7	9.97		
0.8	10.07		
0.9	10.14		

COM-POWER AL-130  
ACTIVE LOOP ANTENNA

S/N: 17067

CALIBRATION DATE: JANUARY 21, 2011

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
0.009	10.19	1	10.64
0.01	10.21	2	10.91
0.02	10.66	3	10.90
0.03	11.42	4	10.77
0.04	11.11	5	10.98
0.05	10.43	6	11.01
0.06	10.47	7	11.08
0.07	10.38	8	11.40
0.08	10.45	9	11.54
0.09	10.22	10	11.60
0.1	10.26	15	8.73
0.2	10.14	20	10.97
0.3	10.20	25	10.41
0.4	10.29	30	10.47
0.5	10.21		
0.6	10.21		
0.7	10.31		
0.8	10.52		
0.9	10.62		

COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15283

CALIBRATION DATE: OCT. 16, 2009

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	13.9	120	13.7
35	11.2	125	13.6
40	10.3	140	13.3
45	11.4	150	13.4
50	10.1	160	13.4
55	9.9	175	16.0
60	9.7	180	16.8
65	8.9	200	18.7
70	8.0	225	17.4
80	6.8	250	16.1
90	7.4	275	23.0
100	11.5	300	19.8



COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15283

CALIBRATION DATE: SEP. 22, 2010

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	12.9	160	13.1
35	10.8	180	16.0
40	10.1	200	16.8
45	10.8	250	15.1
50	11.4	275	20.1
60	9.1	300	20.9
70	8.5		
80	6.0		
90	7.6		
100	11.3		
120	13.2		
140	12.3		

COM-POWER AL-100  
LOG PERIODIC ANTENNA

S/N: 16200

CALIBRATION DATE: OCT. 16, 2009

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	15.1	650	21.1
330	15.5	700	22.4
340	15.6	725	22.3
350	15.7	750	22.1
360	15.8	800	21.8
370	15.9	850	22.4
400	16.3	900	23.0
425	16.8	925	23.2
450	17.4	950	23.4
500	18.4	975	23.5
550	19.1	1000	23.7
600	19.7		

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16200

CALIBRATION DATE: SEP. 22, 2010

FREQUENCY (MHz)	FACTOR (dB)
300	13.8
400	15.0
500	16.6
600	18.2
700	19.4
800	20.5
900	21.1
1000	22.6

COM-POWER PA-103A

PREAMPLIFIER

S/N: 161244

CALIBRATION DATE: APR. 12, 2010

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	32.3	300	31.8
40	32.3	350	31.9
50	32.2	400	31.8
60	32.2	450	31.8
70	32.3	500	31.6
80	32.4	550	31.7
90	32.3	600	31.5
100	32.3	650	31.2
125	32.2	700	31.5
150	32.1	750	31.4
175	32.2	800	30.8
200	32.2	850	31.2
225	32.2	900	31.1
250	32.0	950	30.6
275	32.0	1000	30.2



**FRONT VIEW**

**SECURA KEY**

**ACCESS CONTROL SYSTEM**

**MODEL: RKDT-PPLX-COMBO (RKDT-SR)**

**FCC PART 15 SUBPART C - RADIATED EMISSIONS – 8-25-10**

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**REAR VIEW**

SECURA KEY

ACCESS CONTROL SYSTEM

MODEL: RKDT-PPLX-COMBO (RKDT-SR)

FCC PART 15 SUBPART C - RADIATED EMISSIONS – 8-25-10

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**FRONT VIEW**

SECURA KEY  
ACCESS CONTROL SYSTEM  
MODEL: PPLX

FCC PART 15 SUBPART C - RADIATED EMISSIONS – 3-4-11

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**





**REAR VIEW**

SECURA KEY  
ACCESS CONTROL SYSTEM  
MODEL: PPLX

FCC PART 15 SUBPART C - RADIATED EMISSIONS – 3-4-11

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**





**FRONT VIEW**

**SECURA KEY  
ACCESS CONTROL SYSTEM  
MODEL: RKDT-SA-S**

**FCC PART 15 SUBPART C - RADIATED EMISSIONS – 3-4-11**

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**REAR VIEW**

SECURA KEY  
ACCESS CONTROL SYSTEM  
MODEL: RKDT-SA-S  
FCC PART 15 SUBPART C - RADIATED EMISSIONS – 3-4-11

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**FRONT VIEW**

SECURA KEY  
ACCESS CONTROL SYSTEM  
MODEL: AM-DPR (RKDT-W)  
FCC PART 15 SUBPART C - RADIATED EMISSIONS – 3-4-11

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**REAR VIEW**

SECURA KEY  
ACCESS CONTROL SYSTEM  
MODEL: AM-DPR (RKDT-W)  
FCC PART 15 SUBPART C - RADIATED EMISSIONS – 3-4-11

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**





**FRONT VIEW**

SECURA KEY  
ACCESS CONTROL SYSTEM  
MODEL: RKDT-PPLX-COMBO (RKDT-SR)  
FCC PART 15 SUBPART C – CONDUCTED EMISSIONS – 3-16-11

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**REAR VIEW**

**SECURA KEY**

**ACCESS CONTROL SYSTEM**

**MODEL: RKDT-PPLX-COMBO (RKDT-SR)**

**FCC PART 15 SUBPART C - CONDUCTED EMISSIONS – 3-16-11**

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**FRONT VIEW**

SECURA KEY  
ACCESS CONTROL SYSTEM  
MODEL: PPLX

FCC PART 15 SUBPART C – CONDUCTED EMISSIONS – 3-16-11

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



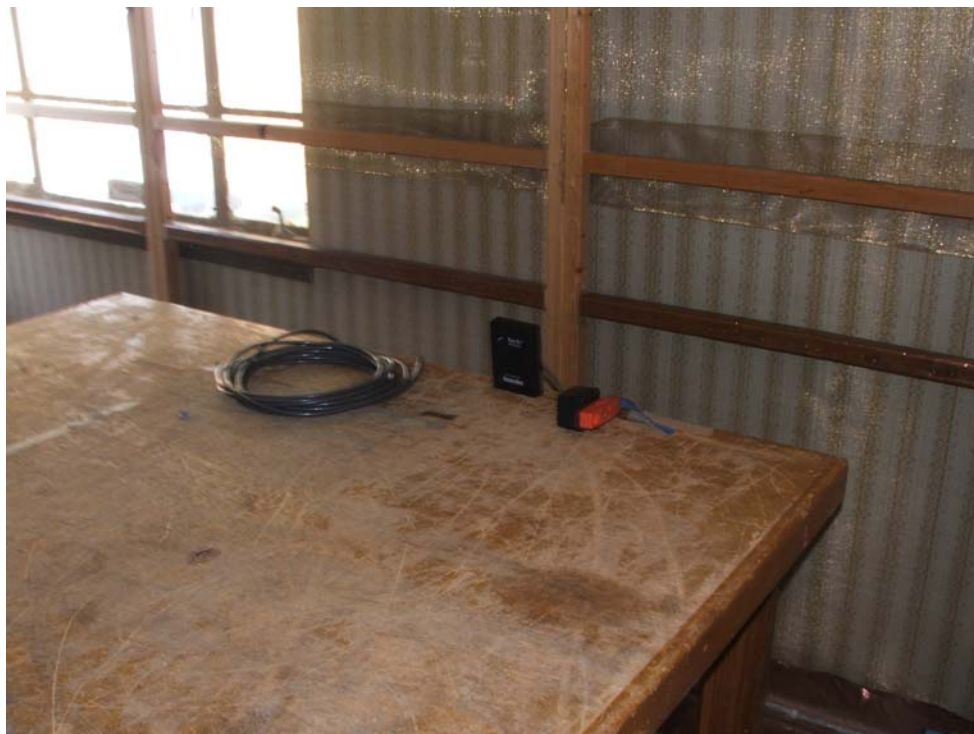
**REAR VIEW**

SECURA KEY  
ACCESS CONTROL SYSTEM  
MODEL: PPLX

FCC PART 15 SUBPART C - CONDUCTED EMISSIONS – 3-16-11

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**





**FRONT VIEW**

SECURA KEY  
ACCESS CONTROL SYSTEM  
MODEL: RKDT-SA-S

FCC PART 15 SUBPART C – CONDUCTED EMISSIONS – 3-16-11

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**REAR VIEW**

**SECURA KEY**

**ACCESS CONTROL SYSTEM**

**MODEL: RKDT-SA-S (RKDT-RO/RKDT-SR)**

**FCC PART 15 SUBPART C - CONDUCTED EMISSIONS – 3-16-11**

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**FRONT VIEW**

SECURA KEY

ACCESS CONTROL SYSTEM

MODEL: AM-DPR (RKDT-W) (AM-DPR/RKDT-W)

FCC PART 15 SUBPART C – CONDUCTED EMISSIONS – 3-16-11

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**REAR VIEW**

SECURA KEY

ACCESS CONTROL SYSTEM

MODEL: AM-DPR (RKDT-W) (AM-DPR/RKDT-W)

FCC PART 15 SUBPART C - CONDUCTED EMISSIONS – 3-16-11

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**

## **APPENDIX E**

### ***DATA SHEETS***

Secura Key  
Access Control System  
RKDT-PPLX-COMBO (RKDT-SR)

Date: 8/25/2010  
Lab: F  
Tested By: R. Ramirez  
Test Distance 3 meters

## Fundamental and Harmonics

[illegible]

Secura Key  
Access Control System  
RKDT-PPLX-COMBO (RKDT-SR)

Date: 8/25/2010  
Lab: F  
Tested By: R. Ramirez  
Test Distance 3 meters

[illegible]



# Secura Key Access Control System

Date: 3/4/2011  
Lab: F  
Tested By: R. Ramirez  
Test Distance 10 meters

Fundamental and Harmonics  
PPLX

[illegible]



**FCC Class B**

Secura Key  
Access Control System

Date: 3/4/2011  
Lab: F  
Tested By: R. Ramirez  
Test Distance 3 meters

**Configuration:**

PPLX

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit (dBuV/m)	Margin (dB)	Peak / QP / Avg	Comments
32.00	27.03	V	40.00	-12.97	Peak	
48.00	24.29	V	40.00	-15.71	Peak	
64.00	26.43	V	40.00	-13.57	Peak	
80.00	21.04	V	40.00	-18.96	Peak	
112.01	18.08	V	43.52	-25.44	Peak	
128.00	18.98	V	43.52	-24.54	Peak	
136.00	19.63	V	43.52	-23.89	Peak	
140.86	19.89	V	43.52	-23.63	Peak	
144.23	19.70	V	43.52	-23.82	Peak	
152.02	19.28	V	43.52	-24.24	Peak	
216.00	21.09	V	43.52	-22.43	Peak	
239.74	16.62	V	46.02	-29.40	Peak	
32.00	23.93	H	40.00	-16.07	Peak	
48.00	18.96	H	40.00	-21.04	Peak	
64.00	20.47	H	40.00	-19.53	Peak	
79.99	21.08	H	40.00	-18.92	Peak	
112.00	18.95	H	43.52	-24.57	Peak	
128.02	18.04	H	43.52	-25.48	Peak	
136.00	19.98	H	43.52	-23.54	Peak	
140.86	20.30	H	43.52	-23.22	Peak	
144.23	17.09	H	43.52	-26.43	Peak	
152.02	18.37	H	43.52	-25.15	Peak	
216.00	22.74	H	43.52	-20.78	Peak	
239.74	17.31	H	46.02	-28.71	Peak	
360.01	21.06	V	46.02	-24.96	Peak	
400.01	25.37	V	46.02	-20.65	Peak	
472.00	19.52	V	46.02	-26.50	Peak	
360.02	21.14	H	46.02	-24.88	Peak	
400.00	27.87	H	46.02	-18.15	Peak	
472.00	20.71	H	46.02	-25.31	Peak	

## Secura Key Access Control System

Date: 3/4/2011  
Lab: F  
Tested By: R. Ramirez  
Test Distance 10 meters

Fundamental and Harmonics  
RKDT-SA-S

[illegible]

**FCC Class B**

Secura Key  
Access Control System

Date: 3/4/2011  
Lab: F  
Tested By: R. Ramirez  
Test Distance 3 meters

**Configuration:**

RKDT-SA-S

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit (dBuV/m)	Margin (dB)	Peak / QP / Avg	Comments
32.00	27.11	V	40.00	-12.89	Peak	
48.01	24.58	V	40.00	-15.42	Peak	
64.00	27.52	V	40.00	-12.48	Peak	
80.00	21.71	V	40.00	-18.29	Peak	
112.01	20.50	V	43.52	-23.02	Peak	
128.00	19.61	V	43.52	-23.91	Peak	
136.00	20.85	V	43.52	-22.67	Peak	
140.86	18.00	V	43.52	-25.52	Peak	
144.23	17.97	V	43.52	-25.55	Peak	
152.00	18.72	V	43.52	-24.80	Peak	
216.00	18.53	V	43.52	-24.99	Peak	
239.74	17.51	V	46.02	-28.51	Peak	
32.00	24.02	H	40.00	-15.98	Peak	
48.01	17.93	H	40.00	-22.07	Peak	
64.01	22.57	H	40.00	-17.43	Peak	
79.99	21.29	H	40.00	-18.71	Peak	
112.00	18.08	H	43.52	-25.44	Peak	
128.02	19.75	H	43.52	-23.77	Peak	
136.01	20.40	H	43.52	-23.12	Peak	
140.86	17.48	H	43.52	-26.04	Peak	
144.24	18.00	H	43.52	-25.52	Peak	
152.02	19.02	H	43.52	-24.50	Peak	
216.00	20.77	H	43.52	-22.75	Peak	
239.75	18.59	H	46.02	-27.43	Peak	
360.01	20.75	V	46.02	-25.27	Peak	
400.01	25.56	V	46.02	-20.46	Peak	
472.01	26.57	V	46.02	-19.45	Peak	
360.02	22.89	H	46.02	-23.13	Peak	
400.00	26.82	H	46.02	-19.20	Peak	
472.00	22.98	H	46.02	-23.04	Peak	

Secura Key  
Access Control System

Date: 3/4/2011  
Lab: F  
Tested By: R. Ramirez  
Test Distance 10 meters

Fundamental and Harmonics  
AM-DPR (RKDT-W)

[illegible]

**FCC Class B**

Secura Key  
Access Control System

Date: 3/4/2011  
Lab: F  
Tested By: R. Ramirez  
Test Distance 3 meters

**Configuration:**

AM-DPR (RKDT-W)

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit (dBuV/m)	Margin (dB)	Peak / QP / Avg	Comments
31.99	29.64	V	40.00	-10.36	Peak	
48.00	22.34	V	40.00	-17.66	Peak	
63.99	26.57	V	40.00	-13.43	Peak	
80.01	21.76	V	40.00	-18.24	Peak	
112.01	21.18	V	43.52	-22.34	Peak	
128.01	19.56	V	43.52	-23.96	Peak	
136.00	20.69	V	43.52	-22.83	Peak	
140.87	20.04	V	43.52	-23.48	Peak	
144.23	16.61	V	43.52	-26.91	Peak	
152.00	16.85	V	43.52	-26.67	Peak	
216.00	19.05	V	43.52	-24.47	Peak	
239.75	18.73	V	46.02	-27.29	Peak	
32.00	22.69	H	40.00	-17.31	Peak	
48.01	19.37	H	40.00	-20.63	Peak	
64.01	23.67	H	40.00	-16.33	Peak	
80.00	20.09	H	40.00	-19.91	Peak	
112.00	17.76	H	43.52	-25.76	Peak	
128.03	19.39	H	43.52	-24.13	Peak	
136.01	19.91	H	43.52	-23.61	Peak	
140.86	20.70	H	43.52	-22.82	Peak	
144.24	18.56	H	43.52	-24.96	Peak	
152.02	20.58	H	43.52	-22.94	Peak	
216.00	21.41	H	43.52	-22.11	Peak	
239.75	18.93	H	46.02	-27.09	Peak	
360.00	19.90	V	46.02	-26.12	Peak	
399.95	24.06	V	46.02	-21.96	Peak	
472.01	21.91	V	46.02	-24.11	Peak	
360.00	19.96	H	46.02	-26.06	Peak	
400.00	23.82	H	46.02	-22.20	Peak	
472.00	19.52	H	46.02	-26.50	Peak	

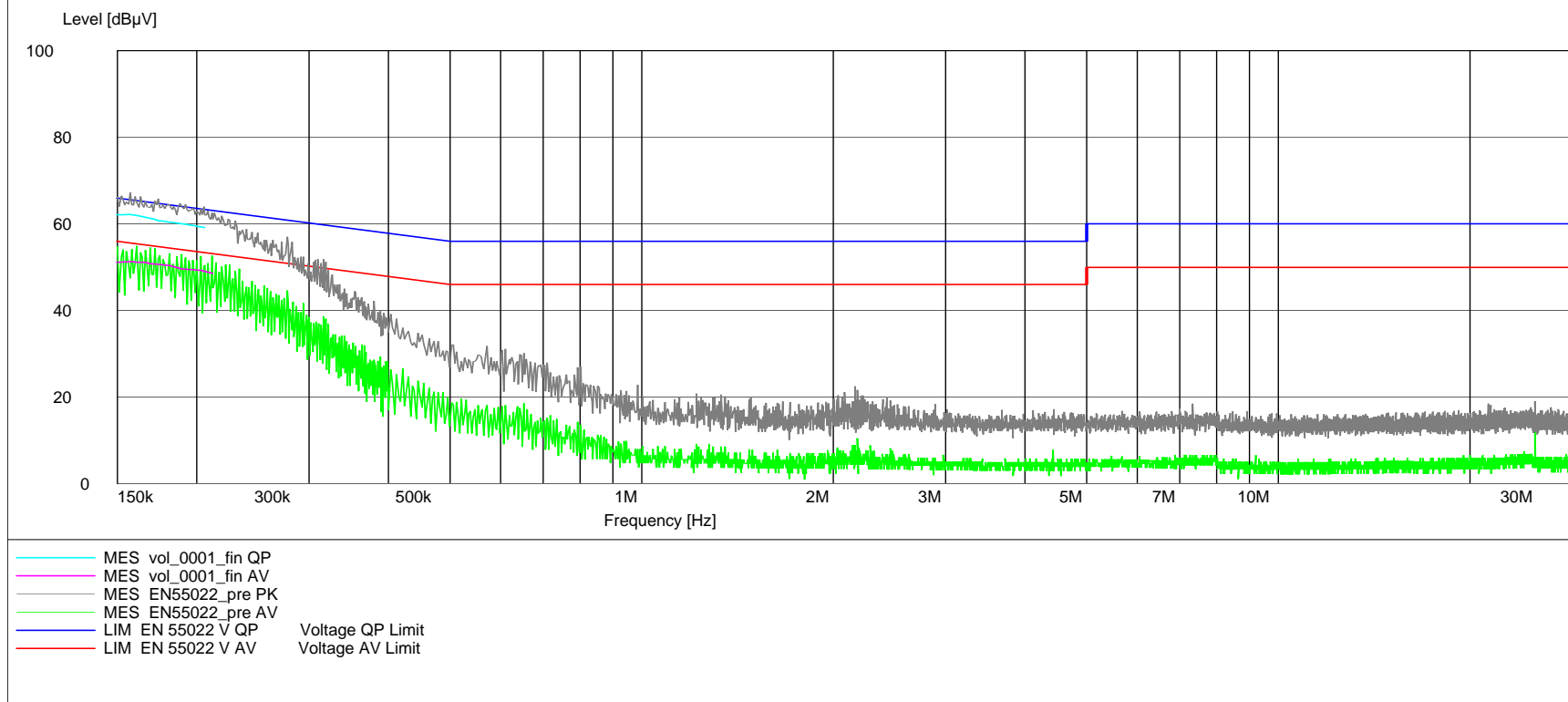
## AC Conducted

### Line

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: RKDT-PPLX-COMBO (RKDT-SR)  
Start of Test: 3/16/11 / 4:22:39PM

### SCAN TABLE: "EN 55022 VoltageFin"

Short Description:	EN 55022 Voltage					
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	1.0 s	9 kHz	LI-215
			CISPR AV			



**AC Conducted****Line**

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: RKDT-PPLX-COMBO (RKDT-SR)  
Start of Test: 3/16/11 / 4:22:39PM

**MEASUREMENT RESULT: "vol\_0001\_fin QP"**

3/16/11 4:25PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.150000	62.10	11.2	66	3.9	1	---
0.152000	62.10	11.2	66	3.8	1	---
0.157000	62.20	11.2	66	3.5	1	---
0.160000	62.00	11.2	66	3.5	1	---
0.163000	61.80	11.2	65	3.6	1	---
0.172000	61.00	11.3	65	3.9	1	---
0.174000	60.80	11.3	65	4.0	1	---
0.188000	60.10	11.4	64	4.0	1	---
0.192000	59.90	11.4	64	4.0	1	---
0.205000	59.20	11.4	63	4.2	1	---

**MEASUREMENT RESULT: "vol\_0001\_fin AV"**

3/16/11 4:25PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.150000	51.10	11.2	56	4.9	1	---
0.158000	51.30	11.2	56	4.3	1	---
0.161000	51.10	11.2	55	4.3	1	---
0.166000	51.10	11.2	55	4.1	1	---
0.169000	50.80	11.3	55	4.2	1	---
0.172000	50.70	11.3	55	4.2	1	---
0.181000	50.40	11.3	54	4.0	1	---
0.189000	49.60	11.4	54	4.4	1	---
0.203000	49.30	11.4	54	4.2	1	---
0.211000	48.60	11.4	53	4.5	1	---

3/16/11 4:25PM vol\_0001

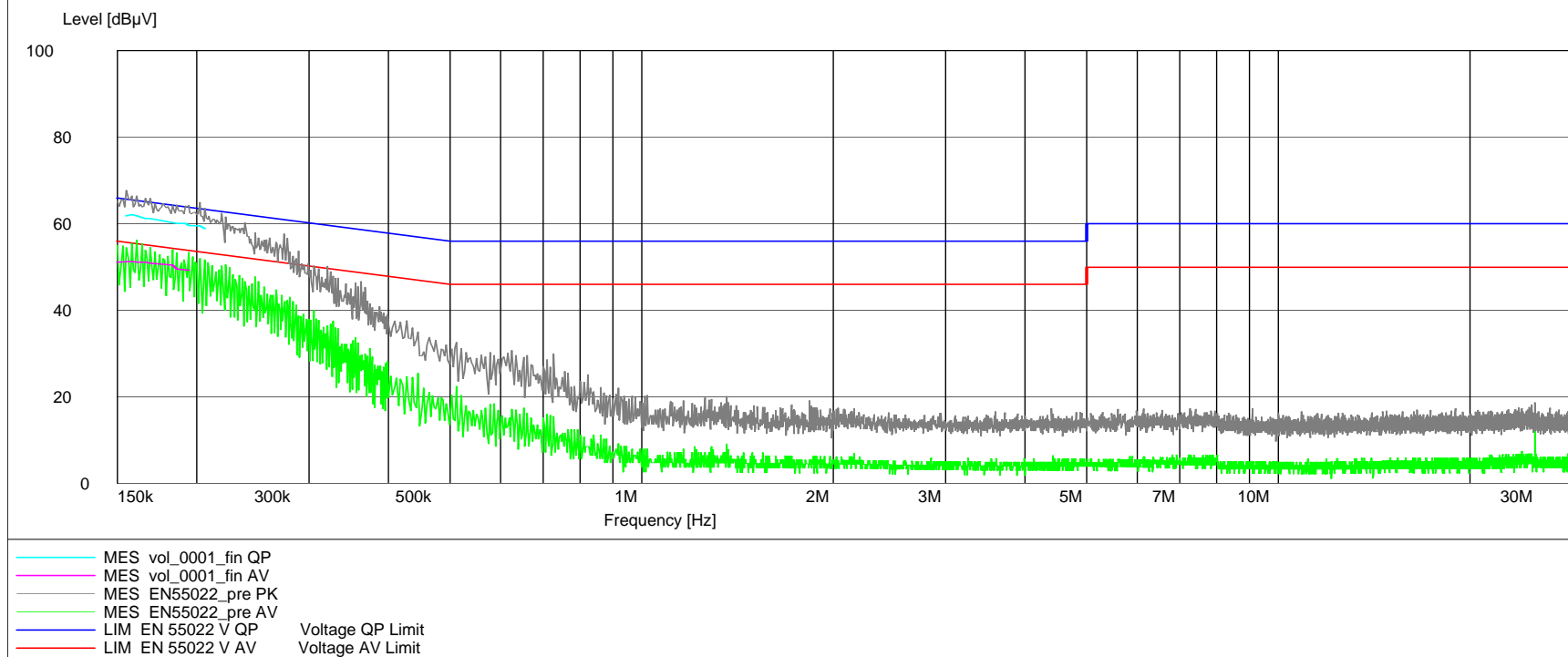
## AC Conducted

### Neutral

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: RKDT-PPLX-COMBO (RKDT-SR)  
Start of Test: 3/16/11 / 4:29:16PM

### SCAN TABLE: "EN 55022 VoltageFin"

Short Description:		EN 55022 Voltage				
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	1.0 s	9 kHz	LI-215
			CISPR AV			





**AC Conducted****Neutral**

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: RKDT-PPLX-COMBO (RKDT-SR)  
Start of Test: 3/16/11 / 4:29:16PM

**MEASUREMENT RESULT: "vol\_0001\_fin QP"**

3/16/11 4:32PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.155000	61.90	11.2	66	3.8	1	---
0.158000	62.10	11.2	66	3.4	1	---
0.161000	61.90	11.2	65	3.5	1	---
0.166000	61.20	11.2	65	3.9	1	---
0.169000	61.20	11.3	65	3.8	1	---
0.186000	60.10	11.3	64	4.1	1	---
0.192000	60.10	11.4	64	3.8	1	---
0.194000	59.60	11.4	64	4.2	1	---
0.202000	59.50	11.4	64	4.0	1	---
0.206000	58.90	11.4	63	4.5	1	---

**MEASUREMENT RESULT: "vol\_0001\_fin AV"**

3/16/11 4:32PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.150000	51.10	11.2	56	4.9	1	---
0.153000	51.20	11.2	56	4.6	1	---
0.158000	51.30	11.2	56	4.3	1	---
0.161000	51.10	11.2	55	4.3	1	---
0.164000	51.10	11.2	55	4.1	1	---
0.166000	51.10	11.2	55	4.1	1	---
0.169000	50.90	11.3	55	4.1	1	---
0.183000	50.50	11.3	54	3.8	1	---
0.186000	49.50	11.3	54	4.8	1	---
0.194000	49.30	11.4	54	4.6	1	---

3/16/11 4:34PM vol\_0001

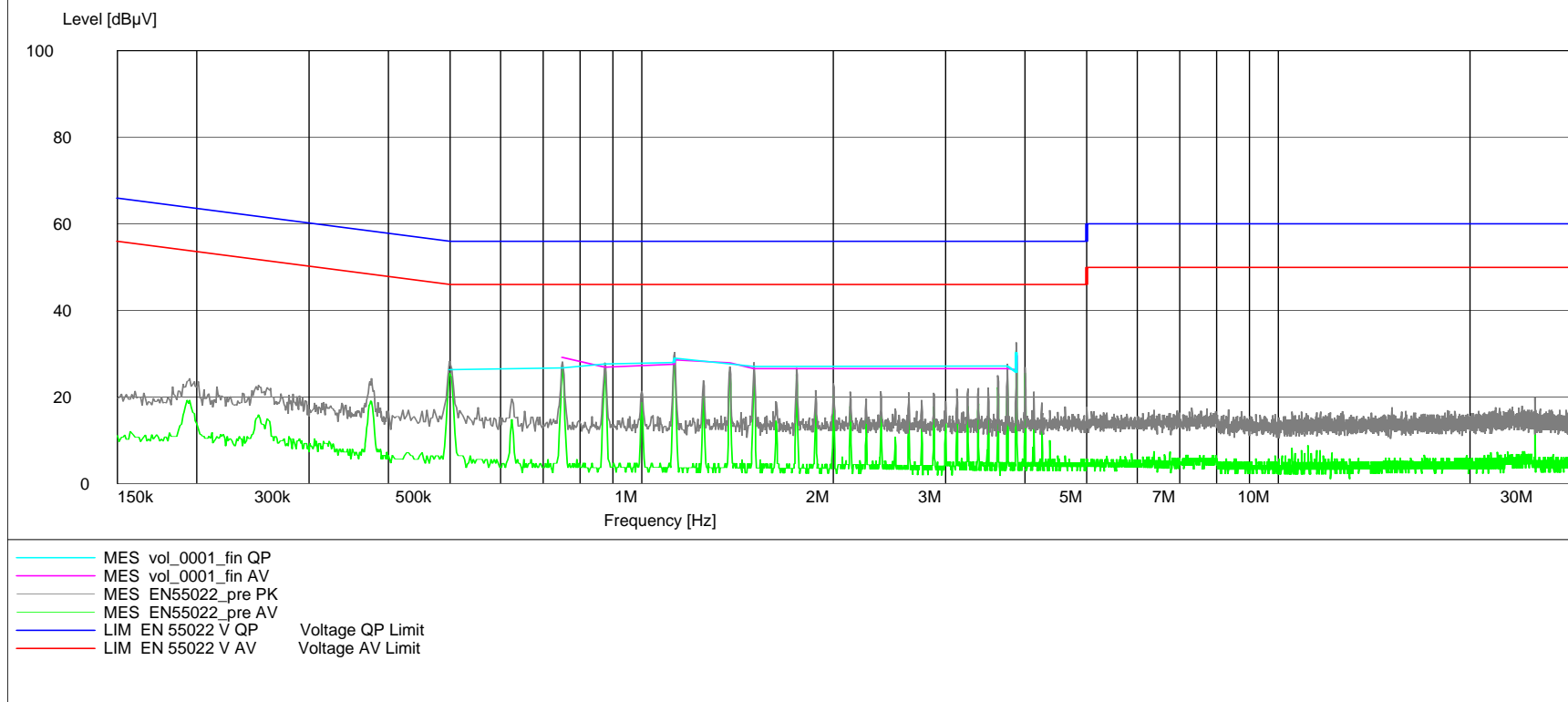
## AC Conducted

### Neutral

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: PPLX  
Start of Test: 3/16/11 / 4:37:51PM

### SCAN TABLE: "EN 55022 VoltageFin"

Short Description:	EN 55022 Voltage					
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	1.0 s	9 kHz	LI-215
CISPR AV						



**AC Conducted****Neutral**

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: PPLX  
Start of Test: 3/16/11 / 4:37:51PM

**MEASUREMENT RESULT: "vol\_0001\_fin QP"**

3/16/11 4:40PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.499000	26.30	11.2	56	29.7	1	---
0.751000	26.70	11.2	56	29.3	1	---
0.874000	27.70	11.2	56	28.3	1	---
1.123000	28.00	11.2	56	28.0	1	---
1.126000	29.00	11.2	56	27.0	1	---
1.501000	27.10	11.1	56	28.9	1	---
3.751000	27.20	10.5	56	28.8	1	---
3.871000	25.70	10.5	56	30.3	1	---
3.874000	30.30	10.5	56	25.7	1	---
3.877000	29.70	10.5	56	26.3	1	---

**MEASUREMENT RESULT: "vol\_0001\_fin AV"**

3/16/11 4:40PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.751000	29.20	11.2	46	16.8	1	---
0.874000	26.90	11.2	46	19.1	1	---
1.123000	27.60	11.2	46	18.4	1	---
1.126000	28.60	11.2	46	17.4	1	---
1.375000	27.90	11.2	46	18.1	1	---
1.501000	26.60	11.1	46	19.4	1	---
3.751000	26.60	10.5	46	19.4	1	---
3.871000	26.30	10.5	46	19.7	1	---
3.874000	29.60	10.5	46	16.4	1	---
3.877000	29.40	10.5	46	16.6	1	---

3/16/11 4:40PM vol\_0001

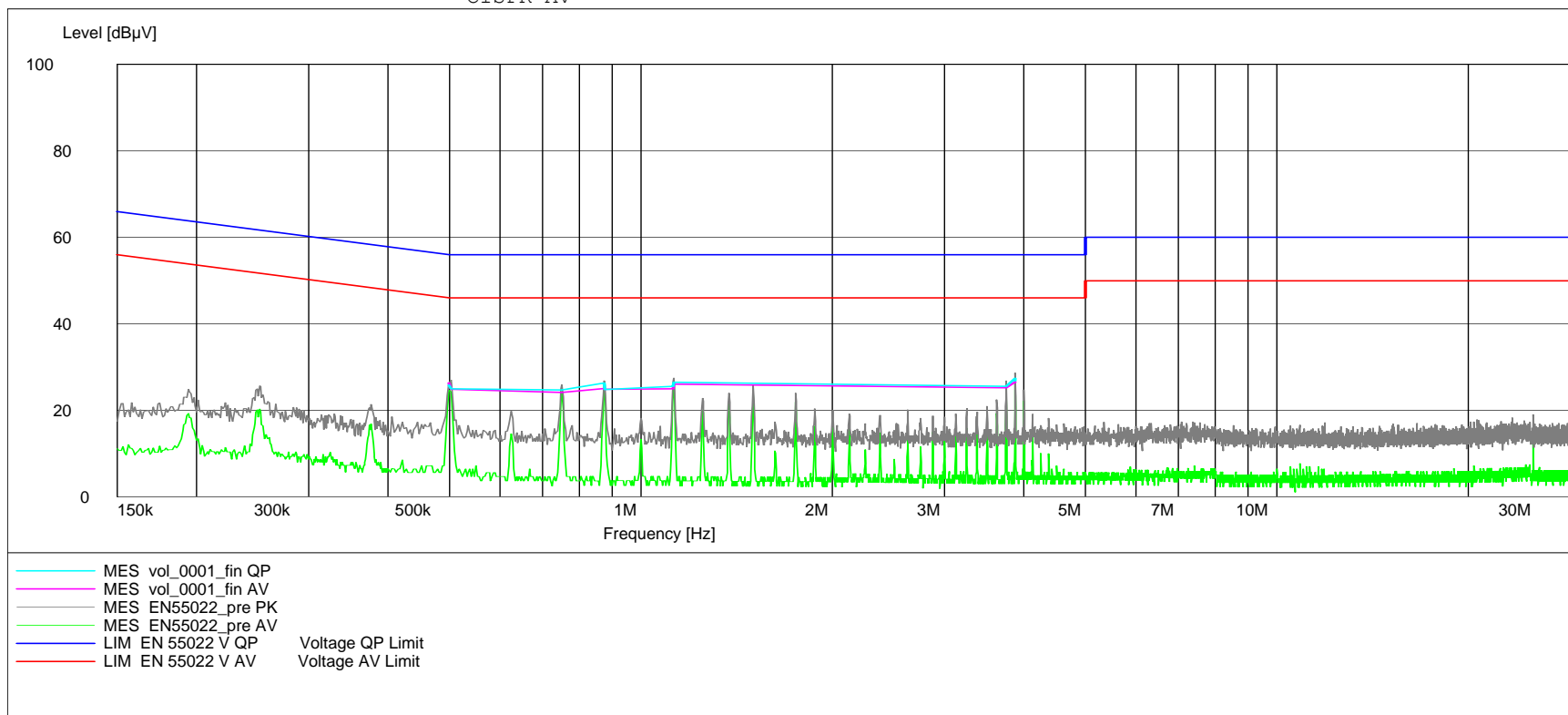
## AC Conducted

### Line

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: PPLX  
Start of Test: 3/16/11 / 4:41:46PM

### SCAN TABLE: "EN 55022 VoltageFin"

Short Description:		EN 55022 Voltage				
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	1.0 s	9 kHz	LI-215
			CISPR AV			



**AC Conducted****Line**

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: PPLX  
Start of Test: 3/16/11 / 4:41:46PM

**MEASUREMENT RESULT: "vol\_0001\_fin QP"**

3/16/11 4:44PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.499000	25.80	11.2	56	30.2	1	---
0.502000	25.00	11.2	56	31.0	1	---
0.751000	24.70	11.2	56	31.3	1	---
0.874000	26.30	11.2	56	29.7	1	---
0.877000	24.80	11.2	56	31.2	1	---
1.123000	25.60	11.2	56	30.4	1	---
1.126000	26.50	11.2	56	29.5	1	---
3.751000	25.60	10.5	56	30.4	1	---
3.874000	27.40	10.5	56	28.6	1	---
3.877000	26.80	10.5	56	29.2	1	---

**MEASUREMENT RESULT: "vol\_0001\_fin AV"**

3/16/11 4:44PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.499000	26.30	11.2	46	19.8	1	---
0.502000	24.90	11.2	46	21.1	1	---
0.751000	24.10	11.2	46	21.9	1	---
0.874000	25.10	11.2	46	20.9	1	---
0.877000	24.90	11.2	46	21.1	1	---
1.123000	25.00	11.2	46	21.0	1	---
1.126000	26.10	11.2	46	19.9	1	---
3.751000	25.20	10.5	46	20.8	1	---
3.874000	26.60	10.5	46	19.4	1	---
3.877000	26.50	10.5	46	19.5	1	---

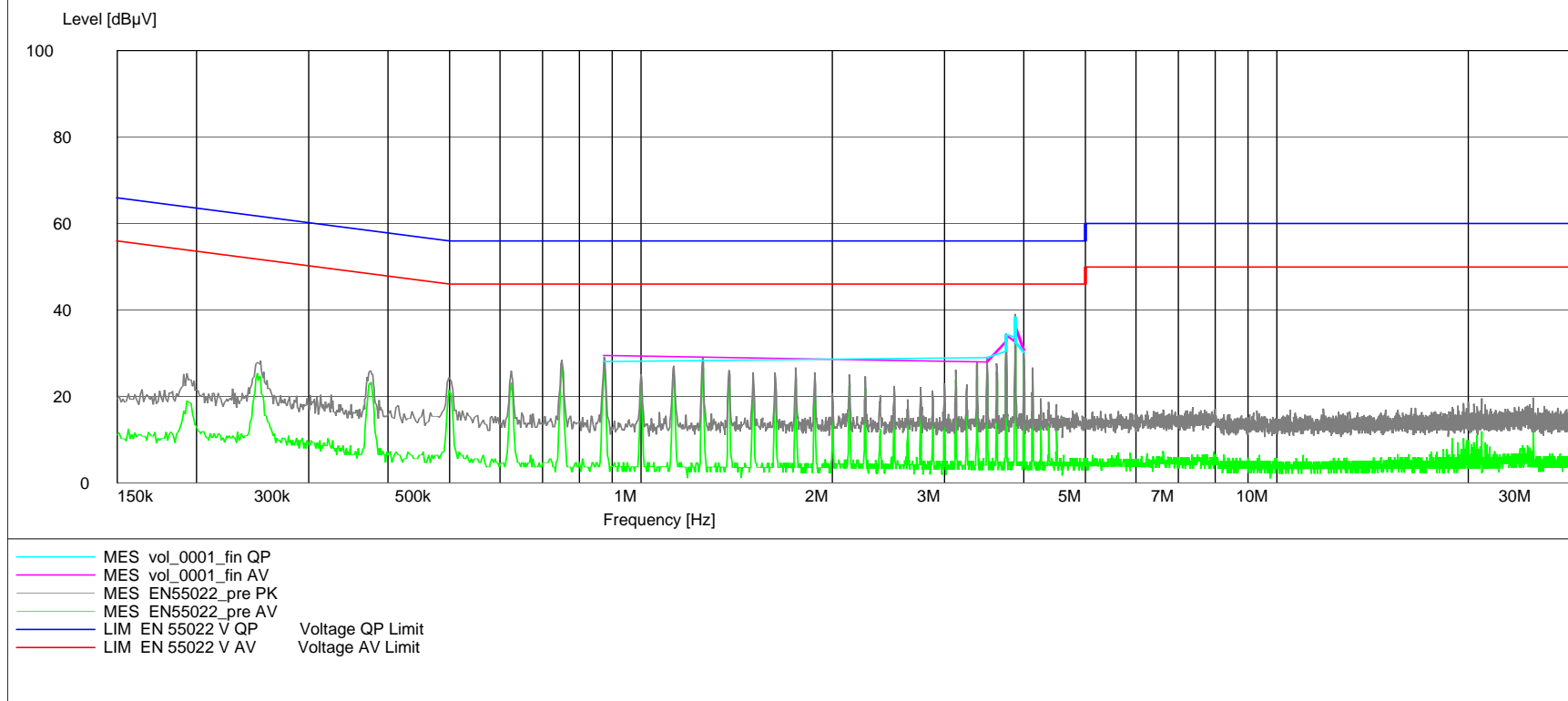
## AC Conducted

### Line

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: RKDT-SA-S  
Start of Test: 3/16/11 / 4:46:29PM

### SCAN TABLE: "EN 55022 VoltageFin"

Short Description:		EN 55022 Voltage				
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	1.0 s	9 kHz	LI-215
			CISPR AV			



**AC Conducted****Line**

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: RKDT-SA-S  
Start of Test: 3/16/11 / 4:46:29PM

**MEASUREMENT RESULT: "vol\_0001\_fin QP"**

3/16/11 4:49PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.874000	28.10	11.2	56	27.9	1	---
3.499000	29.00	10.5	56	27.0	1	---
3.748000	33.00	10.5	56	23.0	1	---
3.751000	34.40	10.5	56	21.6	1	---
3.754000	30.50	10.5	56	25.5	1	---
3.871000	33.70	10.5	56	22.3	1	---
3.874000	38.40	10.5	56	17.6	1	---
3.877000	37.80	10.5	56	18.2	1	---
3.880000	32.50	10.5	56	23.5	1	---
4.000000	30.20	10.5	56	25.8	1	---

**MEASUREMENT RESULT: "vol\_0001\_fin AV"**

3/16/11 4:49PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.874000	29.50	11.2	46	16.5	1	---
3.499000	28.00	10.5	46	18.0	1	---
3.748000	32.80	10.5	46	13.2	1	---
3.751000	34.20	10.5	46	11.8	1	---
3.754000	33.50	10.5	46	12.5	1	---
3.871000	32.70	10.5	46	13.3	1	---
3.874000	37.50	10.5	46	8.5	1	---
3.877000	37.40	10.5	46	8.6	1	---
3.880000	35.90	10.5	46	10.1	1	---
4.000000	30.80	10.5	46	15.2	1	---

3/16/11 4:49PM vol\_0001

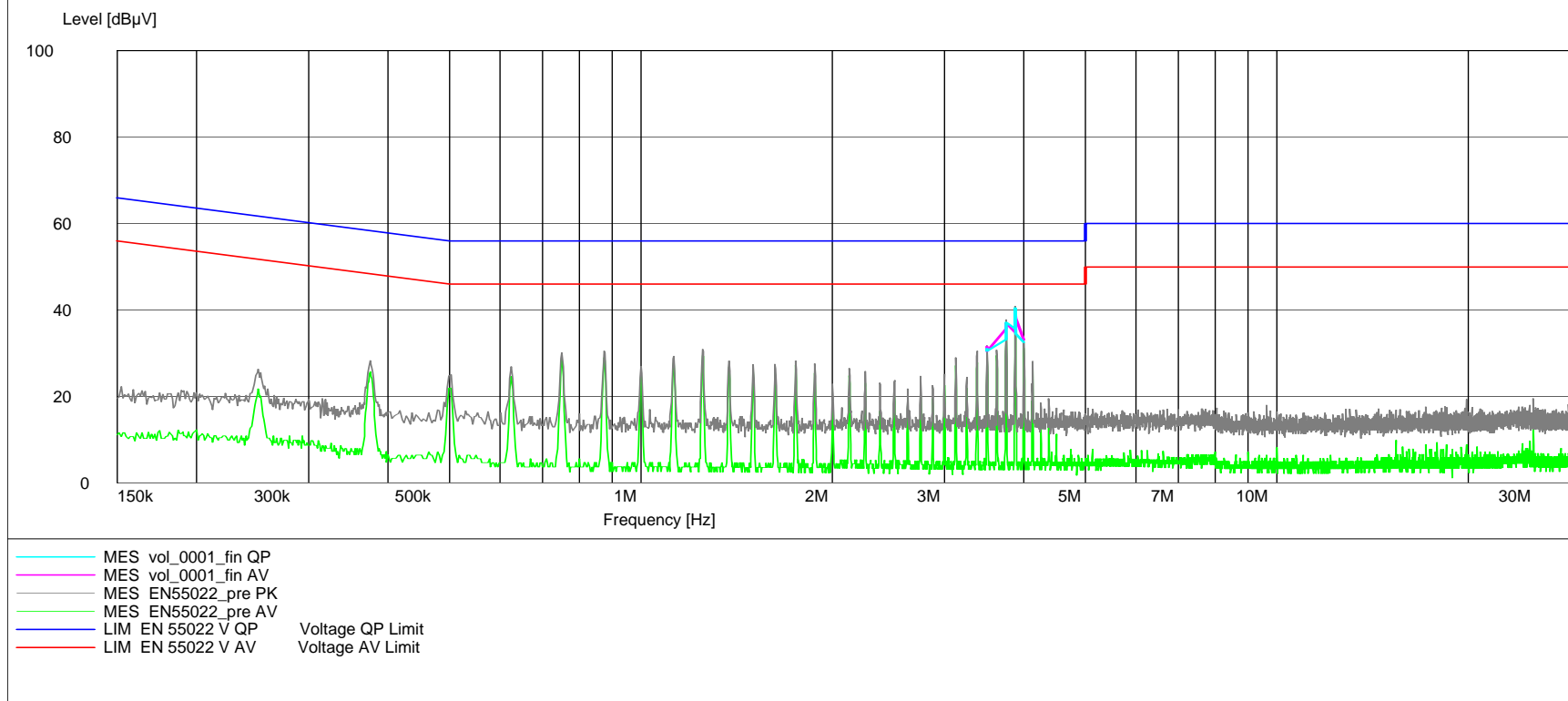
## AC Conducted

### Neutral

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: RKDT-SA-S  
Start of Test: 3/16/11 / 4:50:01PM

### SCAN TABLE: "EN 55022 VoltageFin"

Short Description:		EN 55022 Voltage				
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	1.0 s	9 kHz	LI-215
			CISPR AV			





**AC Conducted****Neutral**

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: RKDT-SA-S  
Start of Test: 3/16/11 / 4:50:01PM

**MEASUREMENT RESULT: "vol\_0001\_fin QP"**

3/16/11 4:52PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
3.499000	31.10	10.5	56	24.9	1	---
3.502000	30.50	10.5	56	25.5	1	---
3.748000	35.80	10.5	56	20.2	1	---
3.751000	37.10	10.5	56	18.9	1	---
3.754000	33.20	10.5	56	22.8	1	---
3.871000	35.70	10.5	56	20.3	1	---
3.874000	40.50	10.5	56	15.5	1	---
3.877000	39.80	10.5	56	16.2	1	---
3.880000	34.50	10.5	56	21.5	1	---
4.000000	32.50	10.5	56	23.5	1	---

**MEASUREMENT RESULT: "vol\_0001\_fin AV"**

3/16/11 4:52PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
3.499000	31.60	10.5	46	14.4	1	---
3.502000	30.40	10.5	46	15.6	1	---
3.748000	35.70	10.5	46	10.3	1	---
3.751000	37.00	10.5	46	9.0	1	---
3.754000	36.30	10.5	46	9.7	1	---
3.871000	34.90	10.5	46	11.1	1	---
3.874000	39.70	10.5	46	6.3	1	---
3.877000	39.60	10.5	46	6.4	1	---
3.880000	38.10	10.5	46	7.9	1	---
4.000000	33.10	10.5	46	12.9	1	---

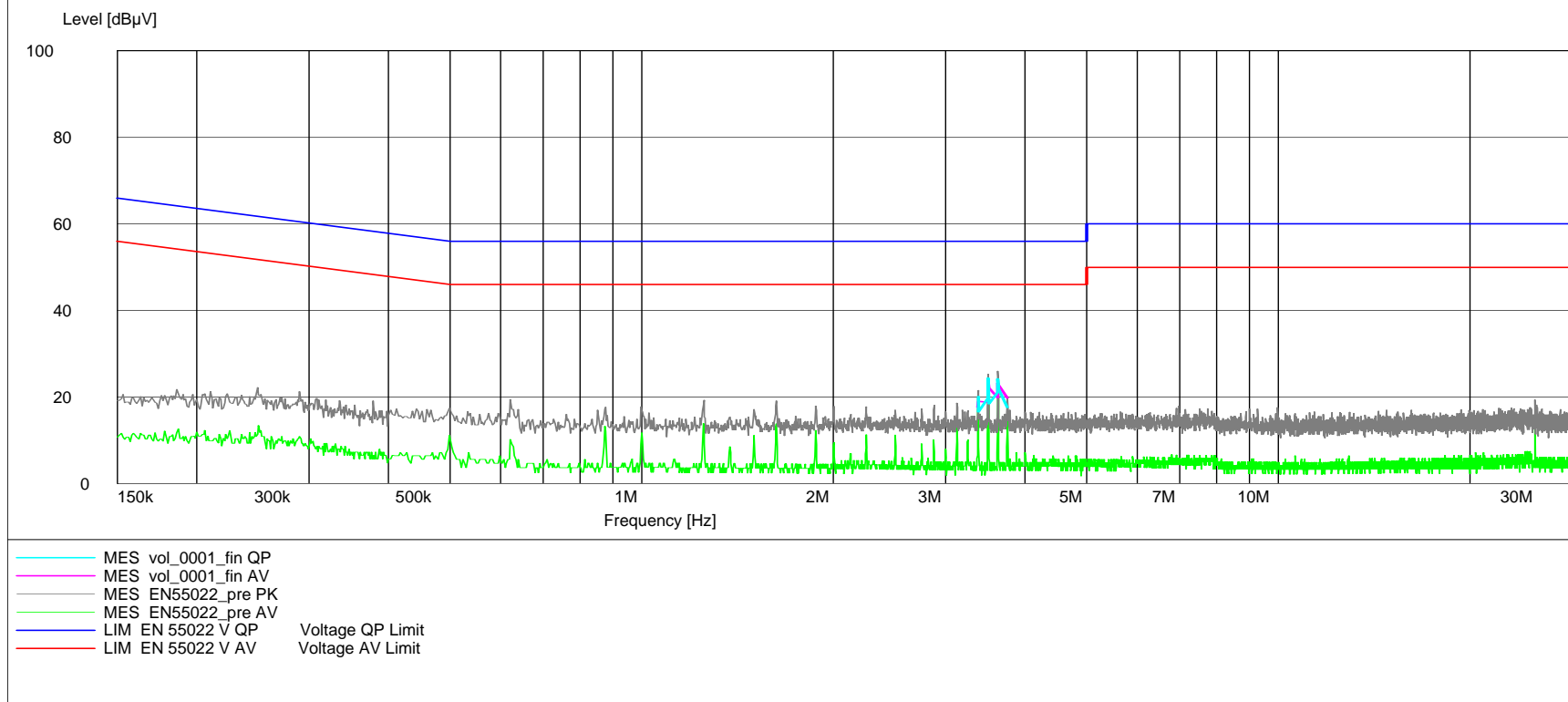
## AC Conducted

### Neutral

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: AM-DPR (RKDT-W)  
Start of Test: 3/16/11 / 4:57:04PM

### SCAN TABLE: "EN 55022 VoltageFin"

Short Description:	EN 55022 Voltage					
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	1.0 s	9 kHz	LI-215
			CISPR AV			



**AC Conducted****Neutral**

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: AM-DPR (RKDT-W)  
Start of Test: 3/16/11 / 4:57:04PM

**MEASUREMENT RESULT: "vol\_0001\_fin QP"**

3/16/11 4:59PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
3.376000	20.10	10.6	56	35.9	1	---
3.379000	16.60	10.6	56	39.4	1	---
3.496000	19.80	10.5	56	36.2	1	---
3.499000	24.40	10.5	56	31.6	1	---
3.502000	23.90	10.5	56	32.1	1	---
3.505000	18.40	10.5	56	37.6	1	---
3.622000	21.10	10.5	56	34.9	1	---
3.625000	24.20	10.5	56	31.8	1	---
3.628000	21.90	10.5	56	34.1	1	---
3.751000	17.60	10.5	56	38.4	1	---

**MEASUREMENT RESULT: "vol\_0001\_fin AV"**

3/16/11 4:59PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
3.373000	17.70	10.6	46	28.3	1	---
3.376000	19.00	10.6	46	27.0	1	---
3.496000	18.80	10.5	46	27.2	1	---
3.499000	23.70	10.5	46	22.3	1	---
3.502000	23.60	10.5	46	22.4	1	---
3.505000	22.10	10.5	46	23.9	1	---
3.622000	19.90	10.5	46	26.1	1	---
3.625000	23.20	10.5	46	22.8	1	---
3.628000	22.80	10.5	46	23.2	1	---
3.751000	19.80	10.5	46	26.2	1	---

3/16/11 5:00PM vol\_0001

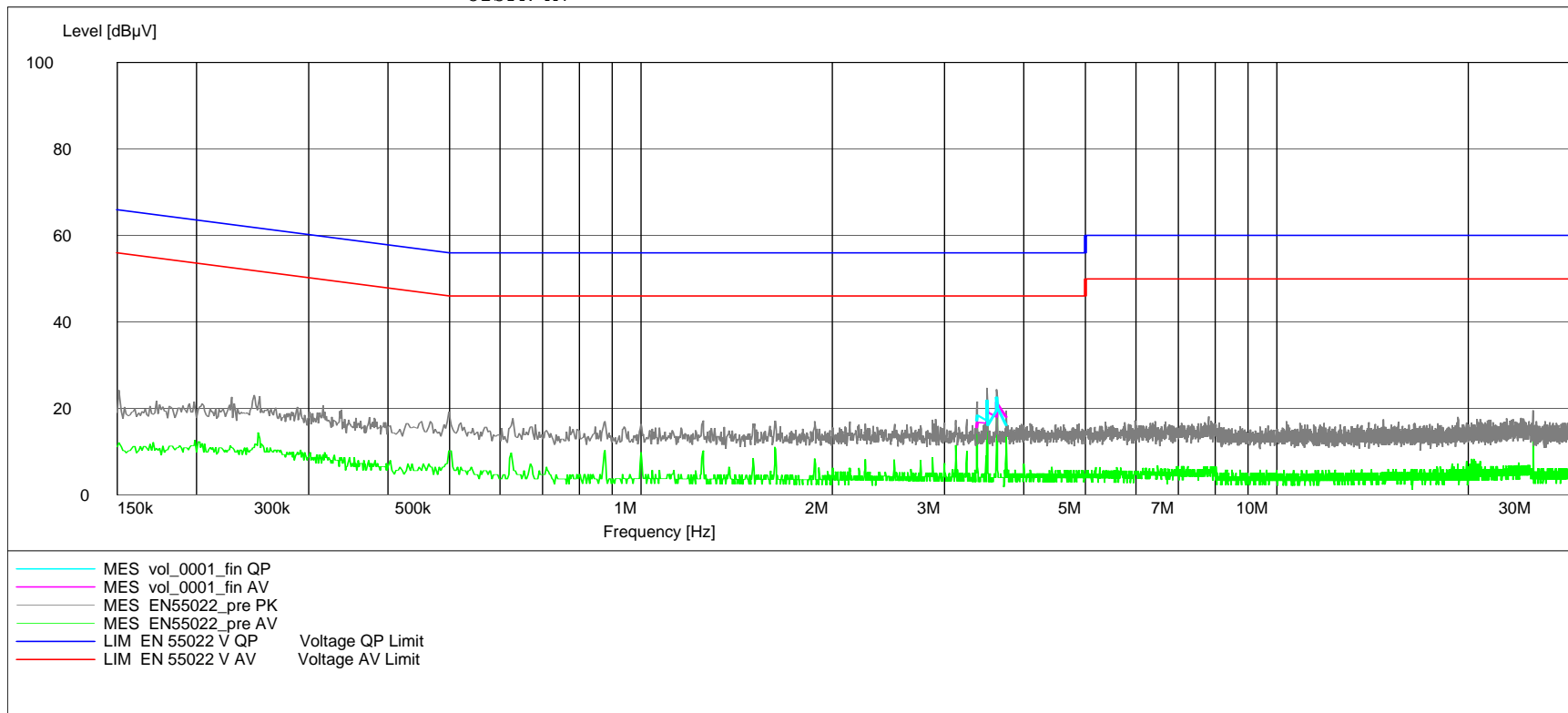
## AC Conducted

### Line

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: AM-DPR (RKDT-W)  
Start of Test: 3/16/11 / 5:01:50PM

### SCAN TABLE: "EN 55022 VoltageFin"

Short Description:		EN 55022 Voltage				
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	1.0 s	9 kHz	LI-215
			CISPR AV			



**AC Conducted****Line**

EUT: Access Control System  
Manufacturer: Secura Key  
Operating Condition: 120V  
Test Site: Lab F  
Operator: R. Ramirez  
Test Specification: EN55022B  
Comment: AM-DPR (RKDT-W)  
Start of Test: 3/16/11 / 5:01:50PM

**MEASUREMENT RESULT: "vol\_0001\_fin QP"**

3/16/11 5:04PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
3.373000	17.20	10.6	56	38.8	1	---
3.376000	18.40	10.6	56	37.6	1	---
3.496000	17.20	10.5	56	38.8	1	---
3.499000	21.90	10.5	56	34.1	1	---
3.502000	21.20	10.5	56	34.8	1	---
3.505000	16.10	10.5	56	39.9	1	---
3.622000	19.50	10.5	56	36.5	1	---
3.625000	22.60	10.5	56	33.4	1	---
3.628000	20.20	10.5	56	35.8	1	---
3.751000	16.10	10.5	56	39.9	1	---

**MEASUREMENT RESULT: "vol\_0001\_fin AV"**

3/16/11 5:04PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
3.373000	15.60	10.6	46	30.4	1	---
3.376000	16.80	10.6	46	29.2	1	---
3.496000	16.60	10.5	46	29.4	1	---
3.499000	20.70	10.5	46	25.3	1	---
3.502000	20.50	10.5	46	25.5	1	---
3.505000	19.10	10.5	46	26.9	1	---
3.622000	18.00	10.5	46	28.0	1	---
3.625000	21.50	10.5	46	24.5	1	---
3.628000	21.00	10.5	46	25.0	1	---
3.751000	18.00	10.5	46	28.0	1	---

3/16/11 5:05PM vol\_0001