FCC PART 15 SUBPART B and C
TEST REPORT

for

MT3 WAND READER

Model: AVID1043

Prepared for

AVID ID SYSTEMS, INC.
3185 HAMNER AVENUE
NORCO, CALIFORNIA 92860

Prepared by: Kyle Fujimoto

KYLE FUJIMOTO

Approved by: James Ross

JAMES ROSS

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DATE: APRIL 15, 2010

	REPORT	APPENDICES					TOTAL
	BODY	*A*	*B*	*C*	*D*	*E*	
PAGES	16	2	2	2	10	9	**41**

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF FIGURES

GENERAL REPORT SUMMARY

Compatible Electronics Inc. generates this electromagnetic emission 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:	MT3 Wand Reader Model: AVID1043 S/N: N/A
Product Description:	See Expository Statement
Modifications:	The EUT was modified during the testing. Please see the list located in Appendix B of this test report.
Customer:	Avid ID Systems, Inc. 3185 Hamner Avenue Norco, California 92860
Test Date(s):	April 15, 2010
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	This test was not performed because the EUT is battery powered only.
2	Radiated RF Emissions 9 kHz – 1000 MHz	Complies with the **Class B** limits of **CFR** Title 47, Part 15, Subpart B; and Subpart C Sections 15.205 and 15.209. Highest reading in relation to spec limit: 43.01 (QP) dBuV @ 204.037 MHz (*U = 4.80 dB)

*U = Expanded Uncertainty with a coverage factor of k=2

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the MT3 Wand Reader, Model: AVID1043. The EMI 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 B** 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.

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

Avid ID Systems, Inc.

Gui-Yang Lu	Director of R/D
Michael F. Cruz	Director of Engineering

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 has not been returned to Avid ID Systems, Inc. as of April 15, 2010.

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
Rx	Receive or Receiver
Tx	Transmit or Transmitter

3. APPLICABLE DOCUMENTS

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

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4: 2003	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 – EMI

The MT3 Wand Reader, Model: AVID1043 (EUT) was connected to a wand antenna via its antenna port. The EUT was tested in three orthogonal axis. The EUT was continuously transmitting.

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 1-meter unshielded cable connecting the EUT to the wand antenna. The cable is hard wired at each end.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
MT3 WAND READER (EUT)	AVID ID SYSTEMS, INC.	AVID1043	N/A	IOL-125-AV1043
WAND ANTENNA	AVID ID SYSTEMS, INC.	N/A	N/A	N/A

5.2 EMI 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	3638A08784	May 29, 2009	1 Year
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	2648A14530	May 29, 2009	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650A	2430A00424	May 29, 2009	1 Year
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	61027	June 12, 2009	1 Year
Loop Antenna	Com Power	AL-130	17089	September 29, 2008	2 Year
Preamplifier	Com-Power	PA-103	1582	January 6, 2010	1 Year
Turntable	Com Power	TT-100	N/A	N/A	N/A

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.

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.

Test Results:

This test was not performed because the EUT is battery powered only.

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

Any emission discovered between 110 kHz and 490 kHz was averaged manually by narrowing the video filter down to 10 Hz and putting the sweep time on AUTO on the spectrum analyzer to keep the amplitude reading calibrated.

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

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 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic 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.

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

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 from 9 kHz to 30 MHz and at a 3-meter test distance from 30 MHz to 1000 MHz to obtain the final test data.

The final qualification data sheets are located in Appendix E.

Test Results:

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

8. CONCLUSIONS

The MT3 Wand Reader, Model: AVID1043, as tested, meets all of the **Class B** 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 RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200528-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.209 or FCC **Class B** 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.

Modifications:

1. Added two ACT surface mount ferrites (P/N: CBZ1206-800-30 and P/N: CBZ0805-102-40) and one TDK surface mount ferrite (P/N: MMZ1608Y152B) to the transmit line.

2. Added two ACT surface mount ferrites (P/N: CBZ1206-800-30 and P/N: CBZ0805-102-40) and one TDK surface mount ferrite (P/N: MMZ1608Y152B) to the swtich line.

3. Added an external clamp-on ferrite (FairRite P/N: 0446167281) on the wand cable at the EUT end.

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

MT3 Wand Reader
Model: AVID1043
S/N: N/A

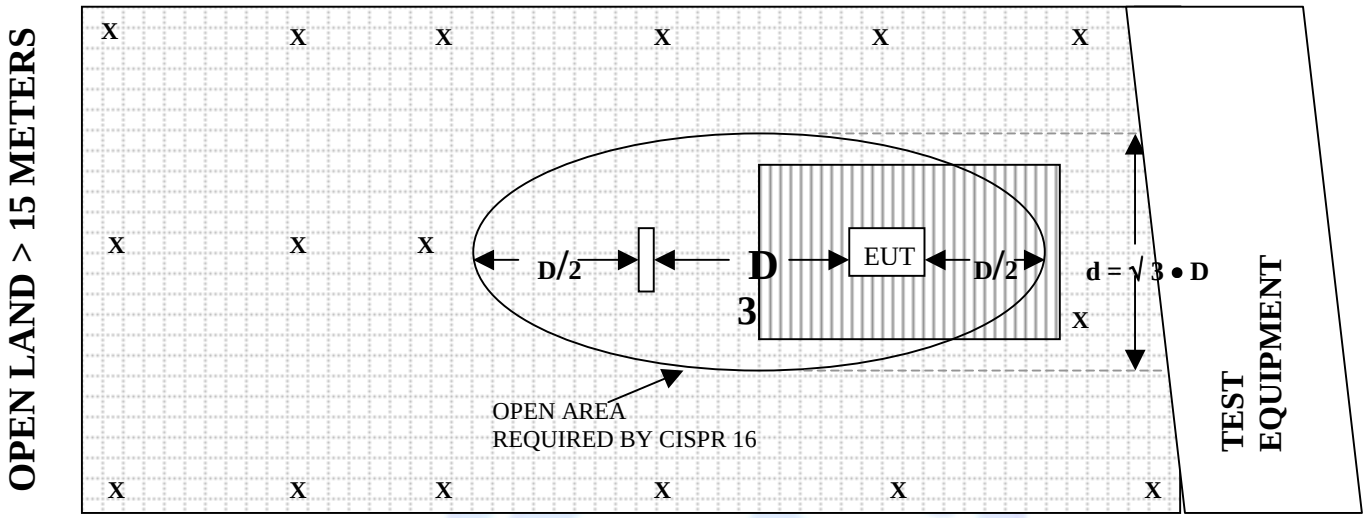
There were no additional models covered under this report.

APPENDIX D

DIAGRAMS, CHARTS AND PHOTOS

FIGURE 1: PLOT MAP AND LAYOUT OF THE 3-METER RADIATED TEST SITE

OPEN LAND > 15 METERS

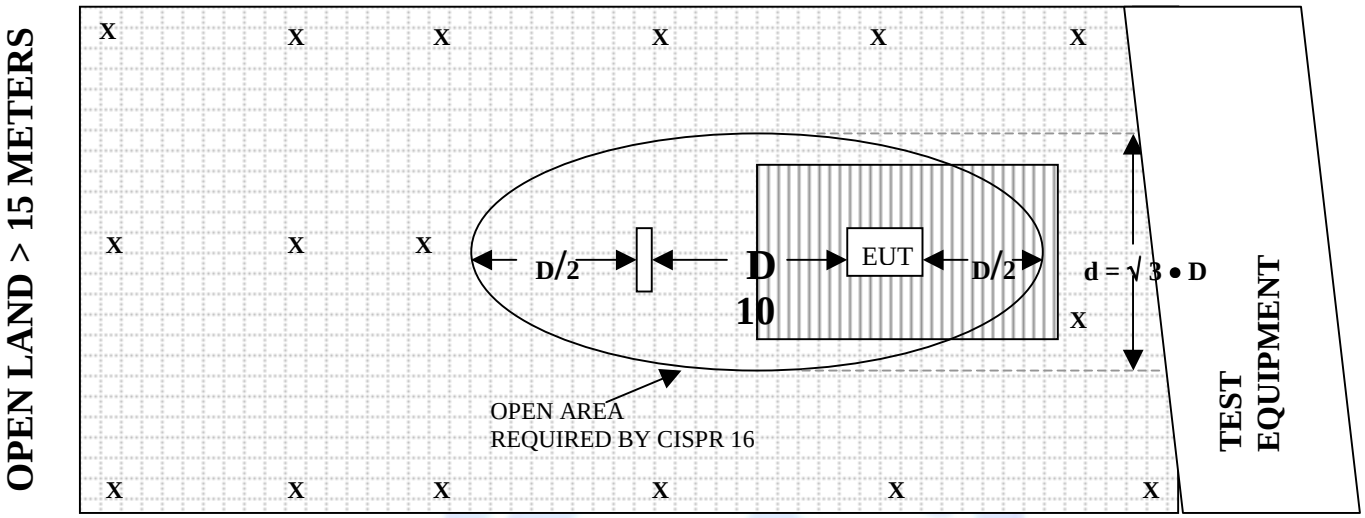


OPEN LAND > 15 METERS

X = GROUND RODS	= GROUND
D = TEST DISTANCE (meters)	= WOOD COVER

FIGURE 2: PLOT MAP AND LAYOUT OF THE 10-METER RADIATED TEST SITE

OPEN LAND > 15 METERS



OPEN LAND > 15 METERS

X	= GROUND RODS		= GROUND
D	= TEST DISTANCE (meters)		= WOOD COVER

COM-POWER AC-220

COMBILOG ANTENNA

S/N: 61027

CALIBRATION DATE: JUNE 12, 2009

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
25	17.7	180	10.0
30	18.1	200	10.2
35	17.4	250	11.7
40	16.8	275	13.3
45	16.1	300	13.9
50	16.3	400	15.8
60	14.0	500	17.3
70	8.1	600	18.7
80	7.5	700	19.6
90	8.5	800	20.9
100	9.9	900	21.5
120	9.9	1000	22.3
125	10.4	1200	18.1
140	10.1	1400	17.9
150	8.9	1600	20.1
160	8.9	1800	18.8
175	10.2	2000	20.0

COM-POWER PA-103

PREAMPLIFIER

S/N: 1582

CALIBRATION DATE: JANUARY 6, 2010

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	33.1	300	32.7
40	33.0	350	32.6
50	32.9	400	33.0
60	33.1	450	32.3
70	33.1	500	32.1
80	32.9	550	32.5
90	32.9	600	32.3
100	32.9	650	32.0
125	33.0	700	32.6
150	32.9	750	32.5
175	32.9	800	31.8
200	32.7	850	31.9
225	32.8	900	32.2
250	32.8	950	32.1
275	32.8	1000	32.1

COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: SEPTEMBER 29, 2008

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-41.57	9.93
0.01	-42.06	9.44
0.02	-42.43	9.07
0.05	-42.50	9.00
0.07	-42.10	9.40
0.1	-42.03	9.47
0.2	-44.50	7.00
0.3	-41.93	9.57
0.5	-41.90	9.60
0.7	-41.73	9.77
1	-41.23	10.27
2	-40.90	10.60
3	-41.20	10.30
4	-41.30	10.20
5	-40.70	10.80
10	-41.10	10.40
15	-42.17	9.33
20	-42.00	9.50
25	-42.20	9.30
30	-43.10	8.40

FRONT VIEW

AVID ID SYSTEMS, INC.
MT3 WAND READER
Model: AVID1043
FCC 15.209 AND FCC CLASS B – 3 METERS – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

AVID ID SYSTEMS, INC.
MT3 WAND READER
Model: AVID1043
FCC 15.209 AND FCC CLASS B – 3 METERS – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

AVID ID SYSTEMS, INC.
MT3 WAND READER
Model: AVID1043
FCC 15.209 – 10 METERS – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

AVID ID SYSTEMS, INC.
MT3 WAND READER
Model: AVID1043
FCC 15.209 – 10 METERS – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

FCC 15.209

Avid ID Systems, Inc.
MT3 Wand Reader
Model: AVID1043

Date: 04/15/2010
Lab: A
Tested By: Kyle Fujimoto

X-Axis - Fundamental and Harmonics of the Transmitter
Test Distance: 10 Meters - Rx Loop Antenna Parallel to the EUT
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
125	61.96	H	84.75	-22.791	Peak	1	0	
250								No Emission Detected
375								No Emission Detected
500								No Emission Detected
625								No Emission Detected
750								No Emission Detected
875								No Emission Detected
1000								No Emission Detected
1125								No Emission Detected
1250								No Emission Detected

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

Avid ID Systems, Inc.
MT3 Wand Reader
Model: AVID1043

Date: 04/15/2010
Lab: A
Tested By: Kyle Fujimoto

Y-Axis - Fundamental and Harmonics of the Transmitter
Test Distance: 10 Meters - Rx Loop Antenna Parallel to the EUT
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
125	84.36	H	84.75	-0.3909	Peak	1	0	
125	84.21	H	84.75	-0.5409	Avg	1	0	
250								No Emission Detected
375								No Emission Detected
500								No Emission Detected
625								No Emission Detected
750								No Emission Detected
875								No Emission Detected
1000								No Emission Detected
1125								No Emission Detected
1250								No Emission Detected

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

Avid ID Systems, Inc.
MT3 Wand Reader
Model: AVID1043

Date: 04/15/2010
Lab: A
Tested By: Kyle Fujimoto

Z-Axis - Fundamental and Harmonics of the Transmitter
Test Distance: 10 Meters - Rx Loop Antenna Parallel to the EUT
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
125	49.76	H	84.75	-34.991	Peak	1	90	
250								No Emission Detected
375								No Emission Detected
500								No Emission Detected
625								No Emission Detected
750								No Emission Detected
875								No Emission Detected
1000								No Emission Detected
1125								No Emission Detected
1250								No Emission Detected

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

Avid ID Systems, Inc.
MT3 Wand Reader
Model: AVID1043

Date: 04/15/2010
Lab: A
Tested By: Kyle Fujimoto

X-Axis - Fundamental and Harmonics of the Transmitter
Test Distance: 10 Meters - Rx Loop Antenna Perpendicular to the EUT
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
125	32.36	V	84.75	-52.391	Peak	1	0	
250								No Emission Detected
375								No Emission Detected
500								No Emission Detected
625								No Emission Detected
750								No Emission Detected
875								No Emission Detected
1000								No Emission Detected
1125								No Emission Detected
1250								No Emission Detected

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

Avid ID Systems, Inc.
MT3 Wand Reader
Model: AVID1043

Date: 04/15/2010
Lab: A
Tested By: Kyle Fujimoto

Y-Axis - Fundamental and Harmonics of the Transmitter
Test Distance: 10 Meters - Rx Loop Antenna Perpendicular to the EUT
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
125	44.86	V	84.75	-39.891	Peak	1	0	
250								No Emission Detected
375								No Emission Detected
500								No Emission Detected
625								No Emission Detected
750								No Emission Detected
875								No Emission Detected
1000								No Emission Detected
1125								No Emission Detected
1250								No Emission Detected

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

Avid ID Systems, Inc.
MT3 Wand Reader
Model: AVID1043

Date: 04/15/2010
Lab: A
Tested By: Kyle Fujimoto

Z-Axis - Fundamental and Harmonics of the Transmitter
Test Distance: 10 Meters - Rx Loop Antenna Perpendicular ot the EUT
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
125	28.46	V	84.75	-56.291	Peak	1	0	
250								No Emission Detected
375								No Emission Detected
500								No Emission Detected
625								No Emission Detected
750								No Emission Detected
875								No Emission Detected
1000								No Emission Detected
1125								No Emission Detected
1250								No Emission Detected

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 Page : 1/2
Customer : AVID ID Systems, Inc. Date : 4/15/2010
Manufacturer : AVID ID Systems, Inc. Time : 8:19:34
Eut name : MT3 Wand Reader Lab : A
Model : Avid1043 Test Distance : 3 Meters
Serial # : N/A
Specification : FCC B
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Test Type: Radiated Emissions Qualification
Test Range: 30 MHz to 1 GHz (Vertical and Horizontal)
Clock: 12 MHz - Operating Mode - Y-Axis (Worst Case)
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	48.039	44.90	1.26	16.22	32.92	29.47	40.00	-10.53
2H	48.055	54.60	1.26	16.22	32.92	39.17	40.00	-0.83
3H	48.055Qp	53.56	1.26	16.22	32.92	38.13	40.00	-1.87
4H	84.042	57.80	1.70	7.92	32.90	34.52	40.00	-5.48
5V	86.715	55.20	1.70	8.18	32.90	32.18	40.00	-7.82
6H	96.904	52.70	1.91	9.48	32.90	31.19	43.50	-12.31
7V	108.039	51.90	2.14	9.90	32.93	31.00	43.50	-12.50
8V	120.054	51.70	2.33	9.91	32.98	30.95	43.50	-12.55
9V	120.054	54.30	2.33	9.91	32.98	33.55	43.50	-9.95
10V	132.054	52.60	2.43	10.25	32.97	32.31	43.50	-11.19
11V	132.054	50.20	2.43	10.25	32.97	29.91	43.50	-13.59
12H	144.038	57.10	2.48	9.61	32.92	36.26	43.50	-7.24
13V	144.056	52.90	2.48	9.60	32.92	32.06	43.50	-11.44
14H	156.038	58.30	2.63	8.90	32.90	36.93	43.50	-6.57
15V	160.056	46.30	2.71	8.91	32.90	25.02	43.50	-18.48
16H	168.038	56.00	2.87	9.61	32.90	35.58	43.50	-7.92
17H	180.045	59.20	3.06	10.00	32.86	39.41	43.50	-4.09
18V	180.056	56.10	3.06	10.00	32.86	36.31	43.50	-7.19
19H	192.035Qp	61.44	3.21	10.12	32.76	42.01	43.50	-1.49
20H	192.040	61.60	3.21	10.12	32.76	42.17	43.50	-1.33
21V	192.051	60.50	3.21	10.12	32.76	41.07	43.50	-2.43
22V	192.051Qp	59.89	3.21	10.12	32.76	40.46	43.50	-3.04
23V	198.054	49.50	3.28	10.18	32.71	30.24	43.50	-13.26
24V	204.024	56.40	3.32	10.33	32.72	37.33	43.50	-6.17
25V	204.029	59.10	3.32	10.33	32.72	40.03	43.50	-3.47
26H	204.037	62.20	3.32	10.33	32.72	43.13	43.50	-0.37
27H	204.037Qp	62.08	3.32	10.33	32.72	43.01	43.50	-0.49
28V	210.054	45.00	3.34	10.53	32.74	26.13	43.50	-17.37
29V	216.029	52.40	3.37	10.72	32.77	33.72	46.00	-12.28
30H	216.047	61.40	3.37	10.72	32.77	42.72	46.00	-3.28
31V	228.029	50.50	3.44	11.08	32.80	32.22	46.00	-13.78
32H	240.047	49.80	3.58	11.43	32.80	32.01	46.00	-13.99
33V	264.041	44.00	3.81	12.62	32.80	27.63	46.00	-18.37
34H	288.047	52.20	3.95	13.62	32.75	37.03	46.00	-8.97
35V	300.041	48.30	4.00	13.90	32.70	33.50	46.00	-12.50

Test Location : Compatible Electronics Page : 2/2
Customer : AVID ID Systems, Inc. Date : 4/15/2010
Manufacturer : AVID ID Systems, Inc. Time : 8:19:34
Eut name : MT3 Wand Reader Lab : A
Model : Avid1043 Test Distance : 3 Meters
Serial # : N/A
Specification : FCC B
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Test Type: Radiated Emissions Qualification
Test Range: 30 MHz to 1 GHz (Vertical and Horizontal)
Clock: 12 MHz - Operating Mode - Y-Axis (Worst Case)
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
36H	312.043	48.60	4.15	14.16	32.67	34.24	46.00	-11.76
37V	312.050	45.30	4.15	14.16	32.67	30.94	46.00	-15.06
38H	336.044	46.70	4.44	14.65	32.63	33.16	46.00	-12.84
39V	360.050	37.00	4.64	15.11	32.68	24.06	46.00	-21.94
40V	420.050	35.80	4.97	16.13	32.71	24.19	46.00	-21.81
41V	432.050	40.20	5.06	16.32	32.54	29.04	46.00	-16.96
42V	460.050	31.30	5.26	16.74	32.26	21.05	46.00	-24.95
43H	462.044	37.90	5.28	16.77	32.25	27.69	46.00	-18.31
44V	500.050	37.40	5.50	17.30	32.10	28.10	46.00	-17.90
45V	520.050	35.20	5.75	17.60	32.27	26.28	46.00	-19.72
46V	560.050	33.30	6.14	18.17	32.46	25.15	46.00	-20.85
47H	726.044	35.70	7.21	19.96	32.55	30.32	46.00	-15.68