



FCC 47 CFR PART 15 SUBPART B TEST REPORT

for

32" LCD TV, LCD Monitor

MODEL: E322VL

FCC ID: MDZ32LD400-UA

Test Report Number:
T100415102-D

Issued for

Amtran Technology Co., Ltd.

17F, No. 268, Lien Chen Rd., Chung Ho City, Taipei County, Taiwan, 235 R.O.C.

Issued By:

Compliance Certification Services Inc.

Linkuo Laboratory

No. 81-1, Lane 210, Pa-De 2nd Rd., Luchu Hsiang,
Taoyuan Shien, (338), Taiwan, R.O.C.

TEL: 886-3-324-0332

FAX: 886-3-324-5235

E-Mail: service@ccsrf.com

Issued Date: April 30, 2010



Note: This report shall not be reproduced except in full, without the written approval of Compliance Certification Services Inc. This document may be altered or revised by Compliance Certification Services Inc. personnel only, and shall be noted in the revision section of the document. The client should not use it to claim product endorsement by TAF, A2LA, NIST or any government agencies. The test results in the report only apply to the tested sample.



Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	April 30, 2010	Initial Issue	ALL	Angel Hu



TABLE OF CONTENTS

1 TEST RESULT CERTIFICATION 4

2 EUT DESCRIPTION 5

3 TEST METHODOLOGY 6

 3.1. DECISION OF FINAL TEST MODE 6

 3.2. EUT SYSTEM OPERATION 6

4 SETUP OF EQUIPMENT UNDER TEST 7

 4.1. DESCRIPTION OF SUPPORT UNITS 7

 4.2. CONFIGURATION OF SYSTEM UNDER TEST 8

5 FACILITIES AND ACCREDITATIONS 9

 5.1. FACILITIES 9

 5.2. ACCREDITATIONS 9

 5.3. MEASUREMENT UNCERTAINTY 10

6 CONDUCTED EMISSION MEASUREMENT 11

 6.1. LIMITS OF CONDUCTED EMISSION MEASUREMENT 11

 6.2. TEST INSTRUMENTS 11

 6.3. TEST PROCEDURES 12

 6.4. TEST SETUP 13

 6.5. DATA SAMPLE: 13

 6.6. TEST RESULTS 14

7 RADIATED EMISSION MEASUREMENT 16

 7.1. LIMITS OF RADIATED EMISSION MEASUREMENT 16

 7.2. TEST INSTRUMENTS 17

 7.3. TEST PROCEDURES 18

 7.4. TEST SETUP 19

 7.5. DATA SAMPLE: 20

 7.6. TEST RESULTS 21

8 PHOTOGRAPHS OF THE TEST CONFIGURATION 25



1 TEST RESULT CERTIFICATION

Product:	32" LCD TV, LCD Monitor
Model:	E322VL
Brand:	AmTRAN; VIZIO
Applicant:	Amtran Technology Co., Ltd. 17F, No. 268, Lien Chen Rd., Chung Ho City, Taipei County, Taiwan, 235 R.O.C.
Manufacturer:	(1) Amtran Electronic Co., Ltd. No. 225, Jinfeng Road, Suzhou New District, Suzhou, Jiangsu PRC. (2) SuZhou Raken Technology Co., Ltd. No. 278, Mayun Rd., New District Su Zhou, China
Tested:	April 21 ~26, 2010
Test Voltage:	120VAC, 60Hz

EMISSION			
Standard	Item	Result	Remarks
FCC 47 CFR Part 15 Subpart B (July 10, 2008), ICES-003 Issue 4 ANSI C63.4-2003	Conducted (Main Port)	PASS	Meet Class B limit
	Radiated	PASS	Meet Class B limit
FCC 47 CFR Part 15 Subpart B Section 15.111	Antenna Power	PASS	Meet limit

- Note: 1. The statements of test result on the above are decided by the request of test standard only; the measurement uncertainties are not factored into this compliance determination.
2. The information of measurement uncertainty is available upon the customer's request.

Deviation from Applicable Standard
None

The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

Ethan Huang
Section Manager

Reviewed by:

Stan Lin
Supervisor



2 EUT DESCRIPTION

Product	32" LCD TV, LCD Monitor		
Brand Name	AmTRAN; VIZIO		
Model	E322VL		
Applicant	Amtran Technology Co., Ltd.		
Serial Number	T100415102		
Received Date	April 15, 2010		
EUT Power Rating	100-240VAC, 50/60Hz		
AC Power Cord Type	Unshielded, 1.8m (Detachable)		
LCD Panel Manufacturer	LG Display	Model	LC320WUG
IP Board Manufacturer	Delta	Model	DPS-172FP XX (X = 0-9,A-X or blank)

I/O Port

I/O PORT TYPES	Q'TY	TESTED WITH
1. D-SUB Port	1	1
2. LAN Port	1	1
3. HDMI Port	3	3
4. Component Port (Y/Pb/Pr)	1 Set	1 Set
5. AV Terminal Port (V/R/L)	1 Set	1 Set
6. Audio out Port	1	1
7. Audio In Port	2 Set	2 Set
8. Optical Port	1	1
9. Antenna Port	1	1
10. USB Port	1	1

Note: 1. The EUT include one Remote Control for sale only.

3 TEST METHODOLOGY

3.1. DECISION OF FINAL TEST MODE

1. The following test mode(s) were scanned during the preliminary test:

Mode	D-SUB	HDMI 1	HDMI 2	HDMI 3	Component	AV Terminal	Antenna	LCD Panel	IP Board
1	1920 x 1080 / 60Hz	---	---	---	---	---	---	LG Display LC320WUG	Delta DPS-172FP XX
2	1280 x 1024 / 75Hz	---	---	---	---	---	---		
3	800 x 600 / 60Hz	---	---	---	---	---	---		
4	---	1080P	---	---	---	---	---		
5	---	---	1080P	---	---	---	---		
6	---	---	---	1080P	---	---	---		
7	---	---	---	---	Component	---	---		
8	---	---	---	---	---	AV Terminal	---		

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

Final Test Mode		
Emission	Conducted Emission	Mode 1
	Radiated Emission	Mode 1

Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.

3.2. EUT SYSTEM OPERATION

1	EMI test program was loaded and executed in “Windows XP” mode.
2	Data was sent to EUT filling the screen with upper case of “H” patterns.
3	Test program sequentially exercised all related I/O’s of Host PC and sent “H” patterns to all applicable output ports of Host PC.
4	Repeat 2 to 3.

Note: Test program is self-repeating throughout the test.



4 SETUP OF EQUIPMENT UNDER TEST

4.1. DESCRIPTION OF SUPPORT UNITS

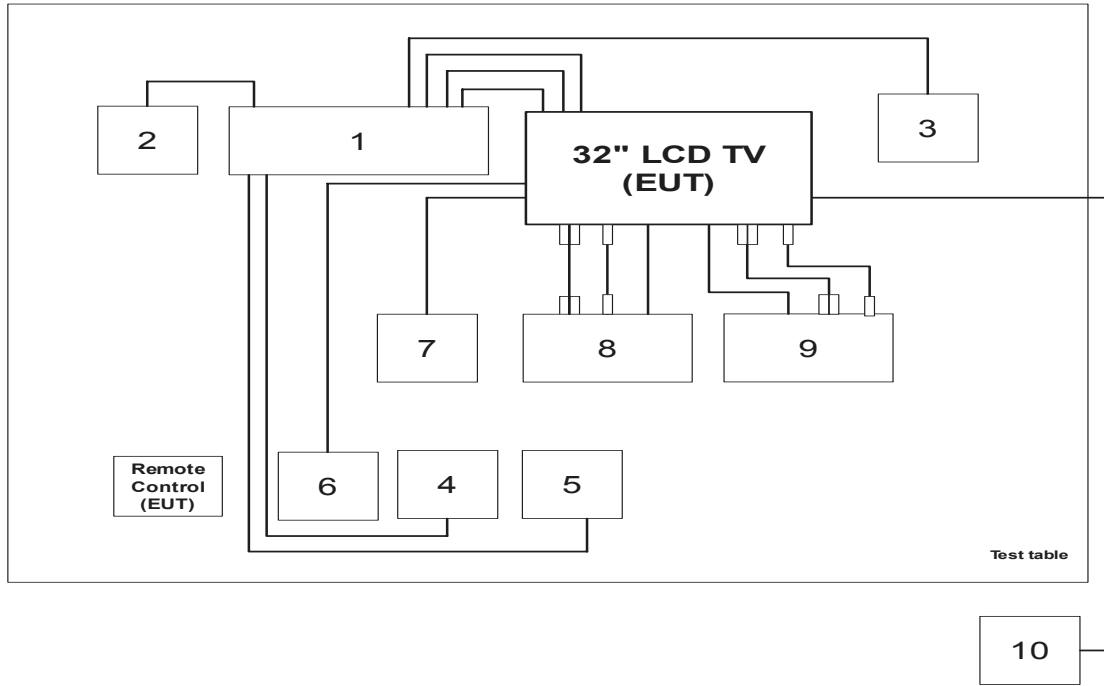
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Equipment	Model No.	Serial No.	FCC ID	Trade Name	Data Cable	Power Cord
1	PC	DX-6120	SGH5330GK7	FCC DoC	HP	D-SUB Cable: Shielded, 1.8m with two cores Audio Cable: Unshielded, 1.8m HDMI Cable: Unshielded, 1.8m	Unshielded, 1.8m
2	Modem	DM-1414	304012264	IFAXDM1414	ACEEX	Unshielded, 1.8m	Unshielded, 1.8m
3	Printer	STYLUS C60	DR3K039425	FCC DoC	EPSON	Shielded, 1.8m	Unshielded, 1.8m
4	PS/2 Keyboard	Y-SJ17	SY528UK	FCC DoC	Logitech	Unshielded, 1.8m	N/A
5	PS/2 Mouse	M-CAA43	LZE03257395	FCC DoC	Logitech	Unshielded, 1.8m	N/A
6	Flash drive	U172	N/A	FCC DoC	PQI	Unshielded, 1.0m	N/A
7	5.1 Amplifier	Z-5400	S-0180B	FCC DoC	Logitech	Optical Cable: Unshielded, 1.0m	Unshielded, 1.8m
8	DVD Player	DVD-S53	VC7KA001763 R	FCC DoC	Panasonic	HDMI Cable: Unshielded, 1.8m Component Cable: Unshielded, 1.8m x 3 Audio Cable: Unshielded, 1.8m x 2	Unshielded, 1.8m
9	DVD Player	DVR-310-S	DDTT004672TA	FCC DoC	PIONEER	HDMI Cable: Unshielded, 1.8m AV Terminal Cable: Unshielded, 1.8m x 3 Audio Cable: Unshielded, 1.8m x 2	Unshielded, 1.8m
10	Notebook PC (Remote)	S7110	DU4A00EG0944P 010	FCC DOC	Fujitsu	LAN Cable: Unshielded, 10m	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.8m with two cores

Note: Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.2. CONFIGURATION OF SYSTEM UNDER TEST

1. PC	2. Modem	3. Printer
4. PS/2 Keyboard	5. PS/2 Mouse	6. Flash drive
7. 5.1 Amplifier	8. DVD Player	9. DVD Player
10. Notebook PC	--	---



(Remote)



5 FACILITIES AND ACCREDITATIONS

5.1. FACILITIES

All measurement facilities used to collect the measurement data are located at No. 81-1, Lane 210, Pa-De 2nd Rd., Luchu Hsiang, Taoyuan Shien, Taiwan.

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4, CISPR 16-1-5.

5.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Taiwan	TAF
USA	A2LA

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	Industry Canada
Norway	Nemko
Japan	VCCI
Taiwan	BSMI
USA	FCC

Copies of granted accreditation certificates are available for downloading from our web site, <http://www.ccsrf.com>

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz~30MHz	± 1.7803
Radiated emissions	30~200MHz	± 3.8881
	200~1000MHz	± 3.8724

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Consistent with industry standard (e.g. CISPR 22: 2006, clause 11, Measurement Uncertainty) determining compliance with the limits shall be based on the results of the compliance measurement. Consequently the measured emissions being less than the maximum allowed emission result in this being a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is based on conducted and radiated emissions being less than U_{CISPR} which is 3.6dB and 5.2dB respectively. CCS values (called U_{Lab} in CISPR 16-4-2) is less than U_{CISPR} as shown in the table above. Therefore, MU need not be considered for compliance.



6 CONDUCTED EMISSION MEASUREMENT

6.1. LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (dBUV)		Class B (dBUV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

NOTE:

- (1) The lower limit shall apply at the transition frequencies.
- (2) The limit decreases in line with the logarithm of the frequency in the range 0.15 to 0.50 MHz.
- (3) All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

6.2. TEST INSTRUMENTS

Conducted Emission Room # 3				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCS30	845552/030	05/18/2010
LISN	R&S	ENV216	100069	01/27/2011
LISN	FCC	FCC-LISN-50/250 -16-2-07	06013	10/13/2010
Test S/W	CCS-3A1-CE			

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. N.C.R = No Calibration Request.

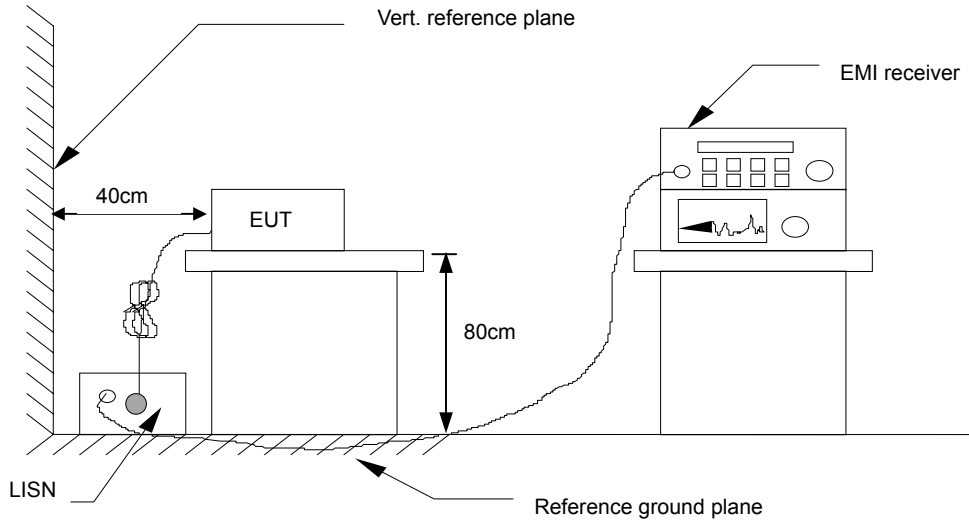
6.3. TEST PROCEDURES (please refer to measurement standard or CCS SOP PA-031)**Procedure of Preliminary Test**

- The EUT and support equipment, if needed, were set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor standing equipment, it is placed on the ground plane, which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- The test equipment EUT installed by AC 120VAC/60Hz main power, through a Line Impedance Stabilization Network (LISN), which was supplied power source and was grounded to the ground plane.
- All support equipment power by from a second LISN.
- The test program of the EUT was started. Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.
- The Receiver scanned from 150kHz to 30MHz for emissions in each of the test modes.
- During the above scans, the emissions were maximized by cable manipulation.
- The test mode(s) described in Item 3.1 were scanned during the preliminary test.
- After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.
- The worst configuration of EUT and cable of the above highest emission level were recorded for reference of the final test.

Procedure of Final Test

- EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.
- The test data of the worst-case condition(s) was recorded.

6.4. TEST SETUP



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

6.5. DATA SAMPLE:

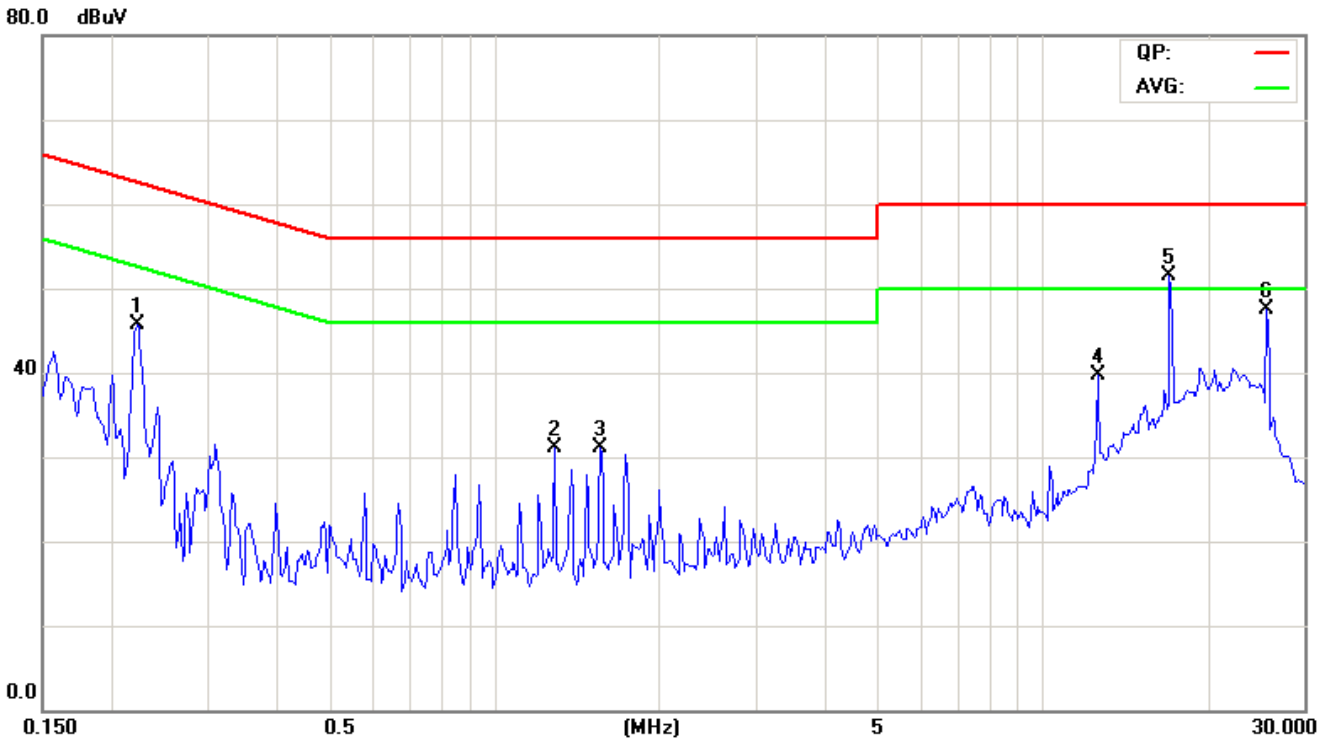
Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correcrtion factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak. limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
x.xx	43.95	33.00	10.00	53.95	43.00	56.00	46.00	-2.05	-3.00	Pass

Frequency (MHz) = Emission frequency in MHz
 Reading (dBuV) = Uncorrected Analyzer/Receiver reading + Insertion loss of LISN, if it > 0.5 dB
 Correction Factor (dB) = LISN Factor + Cable Loss
 Result (dBuV) = Raw reading converted to dBuV and CF added
 Limit (dBuV) = Limit stated in standard
 Margin (dB) = Result (dBuV) – Limit (dBuV)

6.6. TEST RESULTS

CCS Conduction Test 3

Model No.	E322VL	6dB Bandwidth	9 kHz
Environmental Conditions	25°C, 57% RH	Test Mode	Mode 1
Tested by	Han Chaic	Line	L1



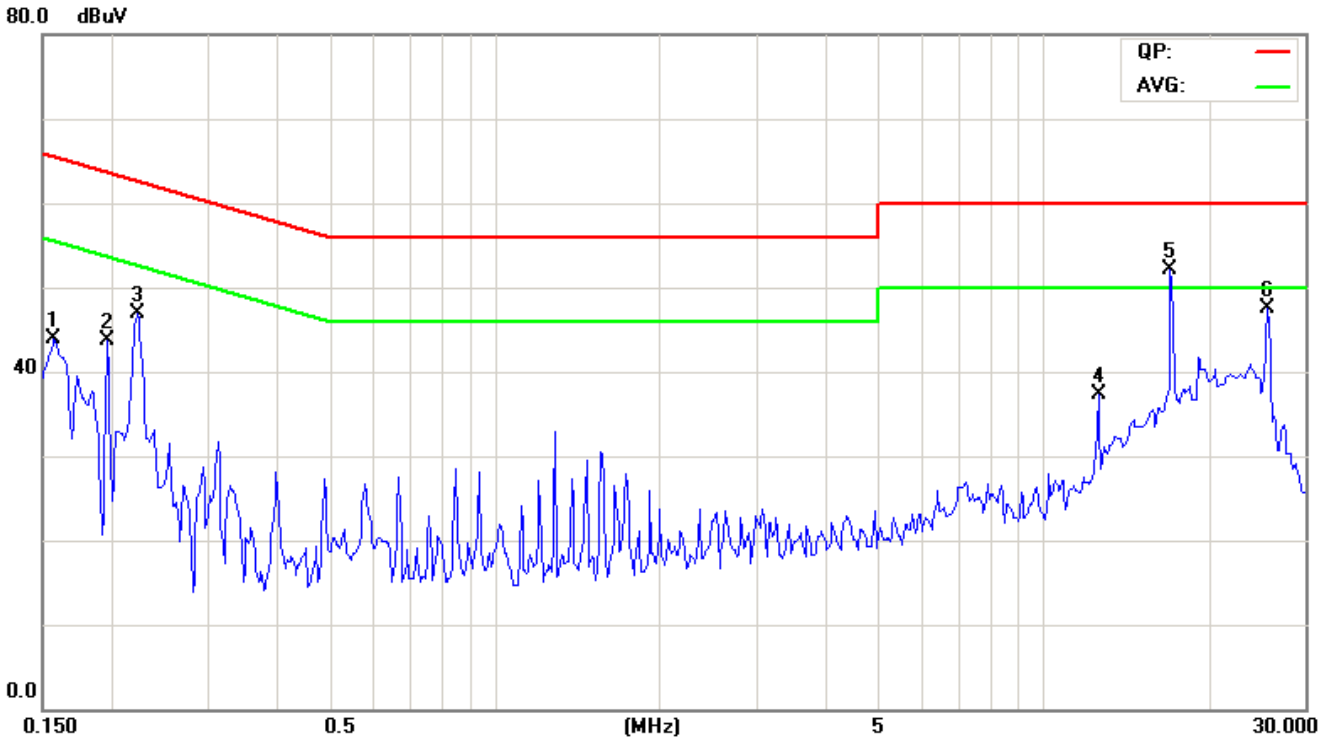
NO.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.2242	36.18	35.68	9.72	45.90	45.40	62.66	52.66	-16.76	-7.26	Pass
2	1.2945	21.34	20.84	9.66	31.00	30.50	56.00	46.00	-25.00	-15.50	Pass
3	1.5680	13.80	11.10	9.70	23.50	20.80	56.00	46.00	-32.50	-25.20	Pass
4	12.6227	25.02	9.82	10.28	35.30	20.10	60.00	50.00	-24.70	-29.90	Pass
5*	17.0797	41.12	34.72	10.38	51.50	45.10	60.00	50.00	-8.50	-4.90	Pass
6	25.6695	37.05	30.65	10.65	47.70	41.30	60.00	50.00	-12.30	-8.70	Pass

REMARKS: L1 = Line One (Live Line)



CCS Conduction Test 3

Model No.	E322VL	6dB Bandwidth	9 kHz
Environmental Conditions	25°C, 57% RH	Test Mode	Mode 1
Tested by	Han Chaic	Line	L2



NO.	Frequency (MHz)	QuasiPeak		Correction factor (dB)	Average		QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark (Pass/Fail)
		reading (dBuV)	reading (dBuV)		result (dBuV)	result (dBuV)					
1	0.1578	35.38	27.38	9.72	45.10	37.10	65.58	55.58	-20.48	-18.48	Pass
2	0.1969	27.59	16.89	9.71	37.30	26.60	63.74	53.74	-26.44	-27.14	Pass
3	0.2242	37.09	36.29	9.71	46.80	46.00	62.66	52.66	-15.86	-6.66	Pass
4	12.5875	22.88	9.08	10.32	33.20	19.40	60.00	50.00	-26.80	-30.60	Pass
5*	17.0797	41.24	34.74	10.46	51.70	45.20	60.00	50.00	-8.30	-4.80	Pass
6	25.6695	37.39	30.99	10.81	48.20	41.80	60.00	50.00	-11.80	-8.20	Pass

REMARKS: L2 = Line Two (Neutral Line)



7 RADIATED EMISSION MEASUREMENT

7.1. LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	dBuV/m (At 10m)	
	Class A	Class B
30 ~ 230	40	30
230 ~ 1000	47	37

Frequency (MHZ)	Class A (dBuV/m) (At 3m)		Class B (dBuV/m) (At 3m)	
	Average	Peak	Average	Peak
Above 960	60	80	54	74

NOTE: (1) The lower limit shall apply at the transition frequencies.
(2) Emission level (dBuV/m) = 20 log Emission level (uV/m).

According to FCC Part 15.33 (b), for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or in which the device operated or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.75	30
1.75-108	1000
108-500	2000
500-1000	5000
Above 1000	5 th harmonic of the highest frequency or 40GHz, whichever is lower



7.2. TEST INSTRUMENTS

Open Area Test Site # 2				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4411B	MY41440314	N.C.R
EMI Test Receiver	R&S	ESCS30	847793/012	05/13/2010
Pre-Amplifier	HP	8447D	2944A08780	08/07/2010
Bilog Antenna	CHASE	CBL 6112A	2307	06/12/2010
Turn Table	CCS	CC-T-1F	N/A	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R
RF Switch	ANRITSU	MP59B	M76890	N.C.R
Site NSA	CCS	N/A	N/A	05/08/2010
Test S/W	LabVIEW 6.1 (CCS OATS EMI SW V2.7)			

3 Meter Chamber				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY48250064	10/28/2010
Pre-Amplifier	HP	8449B	3008A00965	12/31/2010
Pre-Amplifier	MITEQ	AMF-6F-260400-4 0-8P	985646	05/24/2010
Horn Antenna	EMCO	3115	9602-4659	04/16/2011
Horn Antenna	EMCO	3116	00026370	10/15/2010
Low Loss Cable	Huber+Suhner	104PEA	24813/4PEA	04/17/2011
Low Loss Cable	Huber+Suhner	104PEA	30956/4PEA	04/17/2011
Site VSWR	SIDT EUROPE	9x6x6	N/A	02/27/2011
Turn Table	CCS	CC-T-1F	N/A	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R
Test S/W	CCS-3A1RE			

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. N.C.R = No Calibration Request.

7.3. TEST PROCEDURES (please refer to measurement standard or CCS SOP PA-031)

Procedure of Preliminary Test

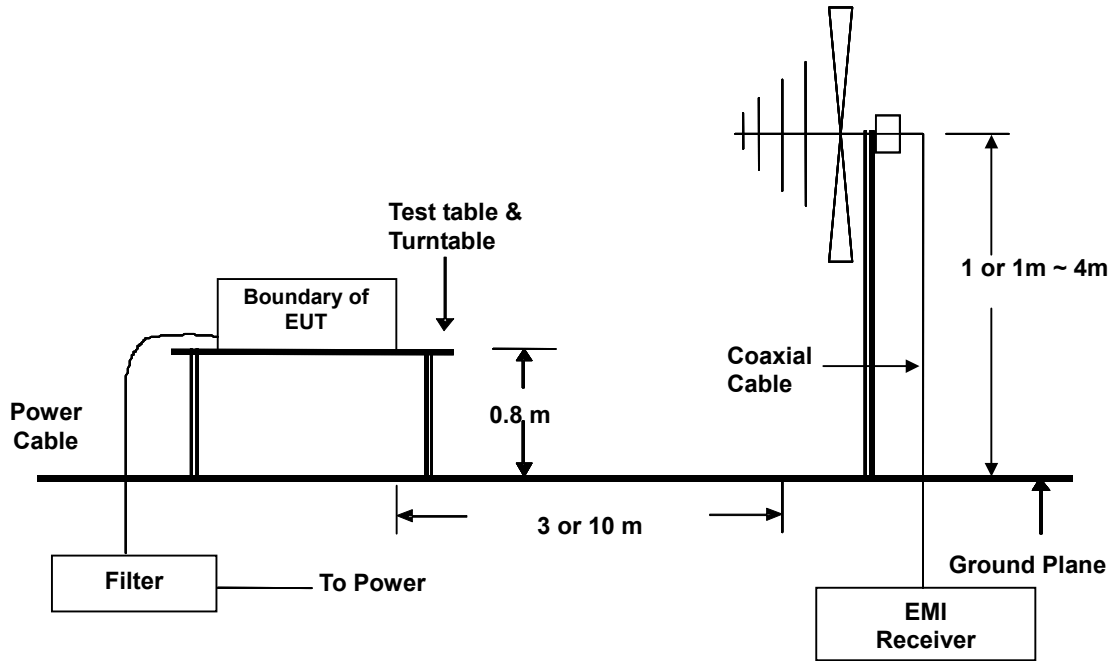
- The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- Support equipment, if needed, was placed as per ANSI C63.4.
- All I/O cables were positioned to simulate typical usage as per ANSI C63.4.
- The EUT received AC 120VAC/60Hz power source from the outlet socket under the turntable. All support equipment power received from another socket under the turntable.
- The antenna was placed at 3 or 10 meter away from the EUT as stated in ANSI C63.4. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.
- The Analyzer / Receiver quickly scanned from 30MHz to 40GHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- The test mode(s) described in Item 3.1 were scanned during the preliminary test:
- After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.
- The worst configuration of EUT and cable of the above highest emission level were recorded for reference of the final test.

Procedure of Final Test

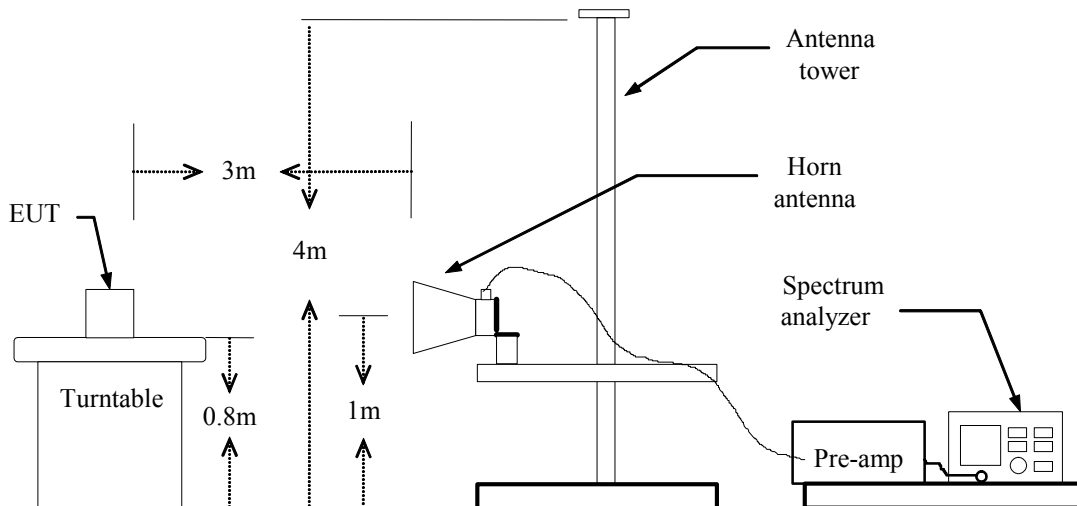
- EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test.
- The Analyzer / Receiver scanned from 30MHz to 40GHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 or 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- Recording at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and only Q.P. reading is presented.
- The test data of the worst-case condition(s) was recorded.

7.4. TEST SETUP

Below 1GHz



Above 1GHz



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.



7.5. DATA SAMPLE:

Below 1GHz

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
xx.xx	16.49	9.86	26.35	30.00	-3.65	116.00	101.00	QP

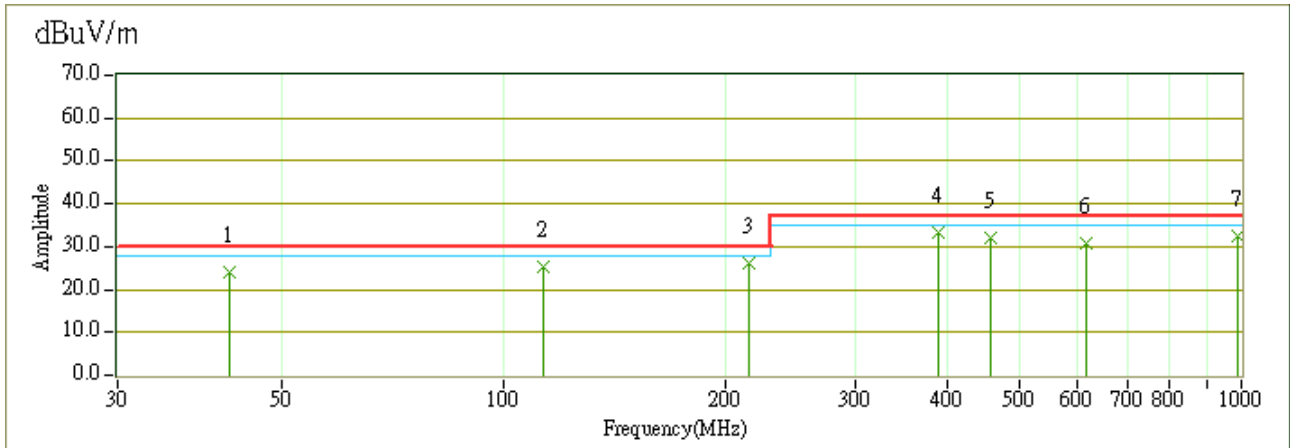
Above 1GHz

Frequency MHz	Corr. Factor (dB/m)	Reading		Result		Limit		Margin	
		Average (dBuV/m)	Peak (dBuV/m)	Average (dBuV/m)	Peak (dBuV/m)	Average (dBuV/m)	Peak (dBuV/m)	Average (dB)	Peak (dB)
xxxx.xxx	-4.35	49.81	58.74	45.46	54.39	54.00	74.00	-8.54	-19.61

- Frequency (MHz) = Emission frequency in MHz
- Reading (dBuV) = Uncorrected Analyzer / Receiver reading
- Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain
- Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)
- Limit (dBuV/m) = Limit stated in standard
- Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)
- Q.P. = Quasi-Peak

7.6. TEST RESULTS

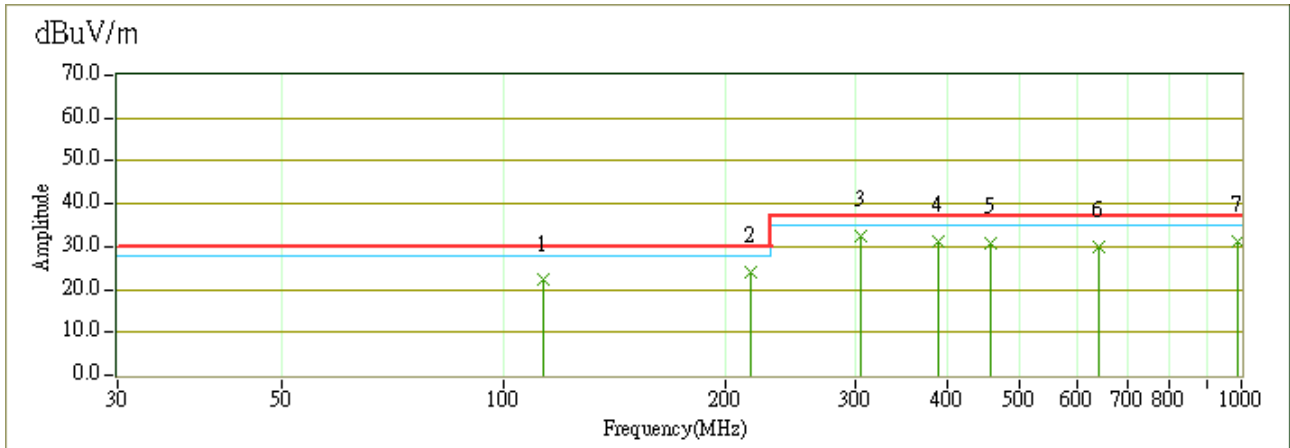
Model No.	E322VL	Test Mode	Mode 1
Environmental Conditions	26°C, 55% RH	6dB Bandwidth	120 kHz
Antenna Pole	Vertical	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested by	Johnny Chen



No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	42.61	37.52	-13.59	23.93	30.00	-6.07	225.10	100.00	QP
2	113.07	38.29	-13.04	25.25	30.00	-4.75	0.00	100.00	QP
3	215.67	39.03	-12.74	26.29	30.00	-3.71	214.60	100.00	QP
4	389.13	38.89	-5.68	33.21	37.00	-3.79	271.20	326.70	QP
5	457.26	37.04	-4.91	32.13	37.00	-4.87	130.50	239.10	QP
6	615.32	32.16	-1.27	30.89	37.00	-6.11	145.80	158.10	QP
7	989.00	28.19	4.25	32.44	37.00	-4.56	269.40	109.30	QP

REMARKS: The other emission levels were very low against the limit.

Model No.	E322VL	Test Mode	Mode 1
Environmental Conditions	25°C, 56% RH	6dB Bandwidth	120 kHz
Antenna Pole	Horizontal	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested by	Johnny Chen



No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	113.25	35.17	-13.03	22.14	30.00	-7.86	220.70	400.00	QP
2	215.76	36.74	-12.74	24.00	30.00	-6.00	352.10	400.00	QP
3	304.95	40.53	-7.94	32.59	37.00	-4.41	66.20	400.00	QP
4	389.47	36.73	-5.67	31.06	37.00	-5.94	239.40	293.40	QP
5	457.13	35.82	-4.91	30.91	37.00	-6.09	360.00	206.80	QP
6	642.35	30.65	-0.58	30.07	37.00	-6.93	236.00	168.30	QP
7	989.11	26.96	4.25	31.21	37.00	-5.79	155.00	100.00	QP

REMARKS: The other emission levels were very low against the limit.



Model No.	E322VL	Test Mode	Mode 1
Environmental Conditions	18°C, 60% RH	Test Frequency Range	1000MHz ~ 3000MHz
Antenna Pole	Vertical	Antenna Distance	3m
Detector Function:	Peak/Average	Tested By	Kevin Liao

Frequency MHz	Corr. Factor (dBuV/m)	Reading		Result		Limit		Margin	
		Average (dBuV/m)	Peak (dBuV/m)	Average (dBuV/m)	Peak (dBuV/m)	Average (dBuV/m)	Peak (dBuV/m)	Average (dB)	Peak (dB)
1190.000	-8.52	--	58.65	--	50.13	--	74.00	--	-23.87
1280.000	-8.01	--	57.82	--	49.81	--	74.00	--	-24.19
1620.000	-6.00	--	55.07	--	49.07	--	74.00	--	-24.93
1960.000	-3.91	--	53.53	--	49.62	--	74.00	--	-24.38
2310.000	-2.58	--	50.44	--	47.86	--	74.00	--	-26.14
2850.000	-0.26	--	49.01	--	48.75	--	74.00	--	-25.25

- REMARKS:**
1. The other emission levels were very low against the limit.
 2. "--", means the average measurement was not performed when the measured peak data under the limit of average detection.



Model No.	E322VL	Test Mode	Mode 1
Environmental Conditions	18°C, 60% RH	Test Frequency Range	1000MHz ~ 3000MHz
Antenna Pole	Horizontal	Antenna Distance	3m
Detector Function:	Peak/Average	Tested By	Kevin Liao

Frequency MHz	Corr. Factor (dBuV/m)	Reading		Result		Limit		Margin	
		Average (dBuV/m)	Peak (dBuV/m)	Average (dBuV/m)	Peak (dBuV/m)	Average (dBuV/m)	Peak (dBuV/m)	Average (dB)	Peak (dB)
1250.000	-8.17	--	51.66	--	43.49	--	74.00	--	-30.51
1410.000	-7.27	--	52.68	--	45.41	--	74.00	--	-28.59
1570.000	-6.31	--	49.59	--	43.28	--	74.00	--	-30.72
1620.000	-6.00	--	49.83	--	43.83	--	74.00	--	-30.17
2310.000	-2.58	--	47.54	--	44.96	--	74.00	--	-29.04
2820.000	-0.40	--	48.73	--	48.33	--	74.00	--	-25.67

- REMARKS:**
1. The other emission levels were very low against the limit.
 2. "--", means the average measurement was not performed when the measured peak data under the limit of average detection.