



## ***FCC EVALUATION REPORT FOR CERTIFICATION***

**Manufacturer : KIMIN ELECTRONIC CO., LTD.**

**Date of Issue : May 11 , 2009**

**293-4, Gongdan -dong, Gumi-si,  
Gyeongbuk, Korea.**

**Order Number: GETEC-C1-09-111**

**Test Report Number: GETEC-E3-09-053**

**Attn : Mr. Se-bong Jang, General Manager**

**Test Site: Gumi College EMC Center**

**FCC Registration Number: (100749, 443957)**

**FCC ID.: TGELT42U5**

**Applicant: KIMIN ELECTRONIC CO., LTD.**

<b>Rule Part(s)</b>	<b>: FCC Part 15 Subpart B</b>
<b>Equipment Class</b>	<b>: Class B computing device peripheral (JBP)</b>
<b>EUT Type</b>	<b>: LCD TV/Monitor</b>
<b>Type of Authority</b>	<b>: Certification</b>
<b>Model Name(Brand Name)</b>	<b>: LT42U55F (KIMIN), KLD-42NA (HCT)</b>

**This equipment has been shown to be in compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2003 / Canadian standard ICES-003**

**I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.**

**Tested by,**

**Reviewed by,**

  
**Hyoungh Seop Kim, Associate Engineer**  
**GUMI College EMC center**

  
**Tae-Sig Park, Technical Manager**  
**GUMI College EMC center**



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*Scope: Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and / or unintentional radiators for compliance with technical rules and regulations of the Federal Communications Commission.*

## 1. General Information

**Applicant: KIMIN ELECTRONIC CO., LTD.**  
**Applicant Address: 293-4, Gongdan-dong, Gumi-si, Gyeongbuk, Korea.**  
**Manufacturer: KIMIN ELECTRONIC CO., LTD.**  
**Manufacturer Address: 293-4, Gongdan-dong, Gumi-si, Gyeongbuk, Korea.**  
**Contact Person: Mr. Se-bong Jang, General Manager**  
**Tel Number: +82-54-462-0100**  
**Fax Number: +82-54-462-7500**

- **FCC ID.** TGELT42U5
- **EUT Type** LCD TV/Monitor
- **Model Name(Brand Name)** LT42U55F (KIMIN), KLD-42NA (HCT)
- **Serial Number** Prototype
- **Rule Part(s)** FCC Part 15 Subpart B
- **Type of Authority** Certification
- **Test Procedure(s)** ANSI C63.4 (2003) / Canadian standard ICES-003
- **Dates of Test** April 17 ~ May 9, 2009
- **Place of Test** **Gumi College EMC Center** ( FCC Registration No.: 100749, 443957)  
407, Bugok-dong, Gumi-si, Gyeongbuk, Korea
- **Test Report Number** GETEC-E3-09-053
- **Dates of Issue** May 11, 2009



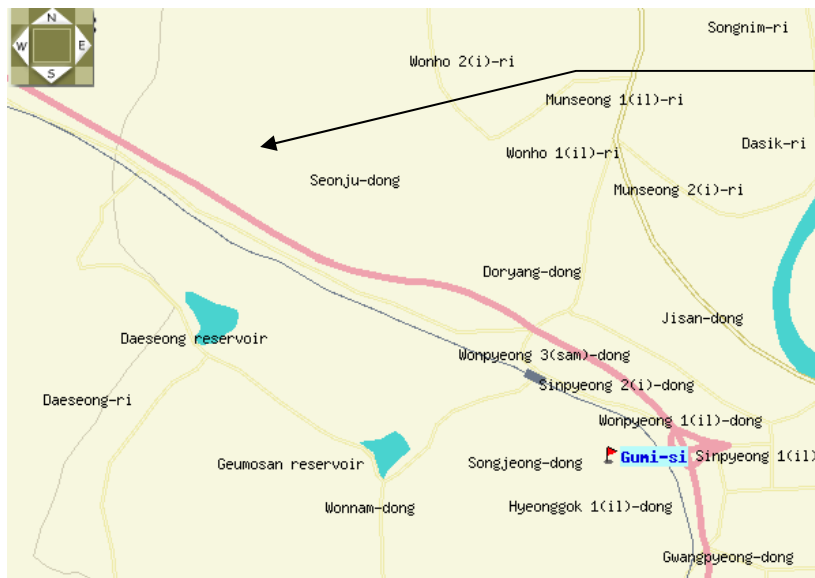
## 2. Introduction

The measurement procedure described in American National Standard for Methods of Measurement of Radio-Nose Emissions From Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (ASNI C63.4-2003) was used in determining radiated and conducted emissions emanating from **KIMIN ELECTRONIC CO., LTD. LCD TV/Monitor (Model Name: LT42U55F, KLD-42NA)**

These measurement tests were conducted at **Gumi College EMC Center**.

The site address is 407, Bugok-dong, Gumi-si, Gyeongbuk, Korea.

This test site is one of the highest point of Gumi 1 college at about 200 km away from Seoul city and 40 km away from Daegu city. It is located in the valley surrounded by mountains in all directions where ambient radio signal conditions are quiet and a favorable area to measure the radio frequency interference on open field test site for the computing and ISM devices manufactures. The detailed description of the measurement facility was found to be in compliance with the requirements of FCC §2.948 according to ANSI C63.4 (2003)



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Gyeongbuk 730-711, Korea.  
Tel: +82-54-440-1195  
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Fig 1. The map above shows the Gumi College in vicinity area.



### 3. Product Information

#### 3.1 Description of EUT

The Equipment under Test (EUT) is the **KIMIN ELECTRONIC CO., LTD. LCD TV/Monitor (Model Name: LT42U55F, KLD-42NA) FCC ID.: TGELT42U5**

Model		KLD-42NA
Dimension (Width x Hight x Depth)	Without Stand	1021.0mm (40.20") x 641.0mm (25.24") x 115.5mm (4.55")
	With Stand	1021.0mm (40.20") x 712.5mm (28.05") x 294mm (11.57")
Weight (kg / lbs)	Without Stand	20.0 kg (44.09 lbs)
	With Stand	22.6 kg (49.82 lbs)
Broadcast Signal System		ATSC / NTSC
Receiving Channel		Air : 2 ~ 69, Cable : 1 ~ 135
Contrast Ratio		1,000:1
Brightness		500 cd/m <sup>2</sup>
Panel Resolution		1920 (H) x 1080 (V)
Power Rating		AC100-240V ~50/60Hz
Consumption		205W
Audio Output		10W + 10W
Operating Temperature		0°C ~ 40°C
Accessories		<ul style="list-style-type: none"><li>• Batteries</li><li>• Power Cord</li><li>• 220V Adaptor Plug</li><li>• Owner's Manual</li><li>• Remote</li><li>• Front Cover</li></ul>
External Port		<ul style="list-style-type: none"><li>• 5 x HDMI</li><li>• RGB IN(PC)</li><li>• 2 x COMPONENT IN</li><li>• S-VIDEO IN</li><li>• AV IN</li><li>• AUDIO IN (RGB / DVI)</li><li>• ANTENNA / CABLE IN</li><li>• DIGITAL AUDIO OUT (COAXIAL)</li><li>• AC IN</li></ul>

**LCD Panel** : LC420WUN (LG Display)

**TV Tuner** : DTV S205ER201A (SAMSUNG)

**Maximum Frequency range** : 166 MHz

**EUT Type: LCD TV/Monitor**

**FCC ID.: TGELT42U5**



### 3.2 Support Equipment / Cables used

#### 3.2.1 Used Support Equipment

Description	Manufacturer	Model Name	S/N & FCC ID
PC	Hewlett Packard	D530	S/N: CNG34800PY FCC ID: DoC
Video card	ATI	ATI RV360(9600)	S/N: SN0402017176 FCC ID: DoC
Key-board	COMPAQ	166516-AD6	S/N: B13BBOR391006D FCC ID: AQ6-23K15
Serial mouse	LOGITECH	M-S69	S/N: 334684-108 FCC ID: JNZ211443
Joystick	Microsoft	X05-92626	S/N: 9262600296169 FCC ID: DoC
DVD player	LG Electronics Inc	LC-954	S/N: 3850R-Z674K FCC ID: DoC
Printer	Hewlett Packard	970CXI	S/N: MY9B01F1FG FCC ID: DoC
TV signal generator	PI International	TPG430B	S/N: 93.01.20.05.09.00.00.02 FCC ID: DoC
8-VSB modulator	Telecommunication Inc.	VSB-ENC-150E	S/N: 2005-726 FCC ID: DoC

*See “Appendix D– Test Setup Photographs” for actual system test set-up*



### 3.2.2 Used Cable(s)

Cable Name	Condition	Description
Power cable	Connected to the EUT	1.8 m unshielded
RGB(Analog) cable	Connected to the EUT and PC	1.8 m shielded with two ferrite cores
HDMI/DVI(Digital) cable	Connected to the EUT and PC	1.95 m shielded
PC Sound cable	Connected to the EUT and PC	1.8 m shielded with a ferrite core
AV input cable	Connected to the EUT and DVD player	1.8 m shielded with two ferrite cores
Component cable	Connected to the EUT and DVD player	3.0 m shielded with two ferrite cores
Component sound cable	Connected to the EUT and DVD player	3.0 m shielded with two ferrite cores
S-video cable	Connected to the EUT and DVD player	1.8 m shielded
Antenna cable	Connected to the EUT and TV signal generator	10 m shielded with two ferrite cores
Digital audio out	Connected to the EUT and DVD player	1.8 m shielded

### 3.3 Modification Item(s)

- None



## 4. Description of tests

### 4.1 Test Condition

The EUT was installed, arranged and operated in a manner that is most representative of equipment as typically used. The measurements were carried out while varying operating modes and cable positions within typically arrangement to determine maximum emission level.

The representative and worst test mode(s) were noted in the test report.

- Test Voltage / Frequency : AC 120 V / 60 Hz
- Test Mode(s)
  - . Monitor mode
  - . Radiated emission : 1 024 \* 768 / 60 Hz (RGB\_Analog), 1 024 \* 768 / 60 Hz (HDMI/DVI\_Digital)
  - . Conducted emission : 1 024 \* 768 / 60 Hz (RGB\_Analog), 1 024 \* 768 / 60 Hz (HDMI/DVI\_Digital)  
800 \* 600 / 60 Hz (RGB\_Analog), 640 \* 480 / 60 Hz (RGB\_Analog)
- Operating test pattern
  - . “H” character scrolling mode (Font size: 10)
  - . Black background white character.
  - . Brightness and contrast was adjusted as maximum level.
  - . 1 kHz sound tone with winamp player.
- TV & AV portion of this equipment will be applied the “Verification” procedure.





## 4.2 Conducted Emission

The Line conducted emission test facility is inside a 4 m × 8 m × 2.5 m shielded enclosure. (FCC Registration No.: 100749)

The EUT was placed on a non-conducting 1.0 m by 1.5 m table, which is 0.8 m in height and 0.4 m away from the vertical wall of the shielded enclosure.

The EUT is powered from the Rohde & Schwarz LISN (ESH2-Z5) and the support equipment is powered from the Rohde & Schwarz LISN (ESH3-Z5). Powers to the LISN are filtered by high-current high insertion loss power line filter.

Sufficient time for EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition.

The RF output of the LISN was connected to the EMI test receiver (Rohde & Schwarz, ESCS30).

The EMI test receiver was scanned from 150 kHz to 30 MHz with 20 ms sweep time to determine the frequency producing the maximum EME from the EUT. The frequency producing the maximum level was re-examined using Quasi-Peak mode of the EMI test receiver.

The bandwidth of Quasi-peak mode was set to 9 kHz. Each emission was maximized consistent with typical applications by varying the configuration of the test sample. Interface cables were connected to the available interface ports of the test unit. The effect of varying the position of cables was investigated to find the configuration that produces maximum diagram emission. Excess cable lengths were bundled at center with 30 cm ~ 40 cm.

Each EME reported was calibrated using the R/S signal generator

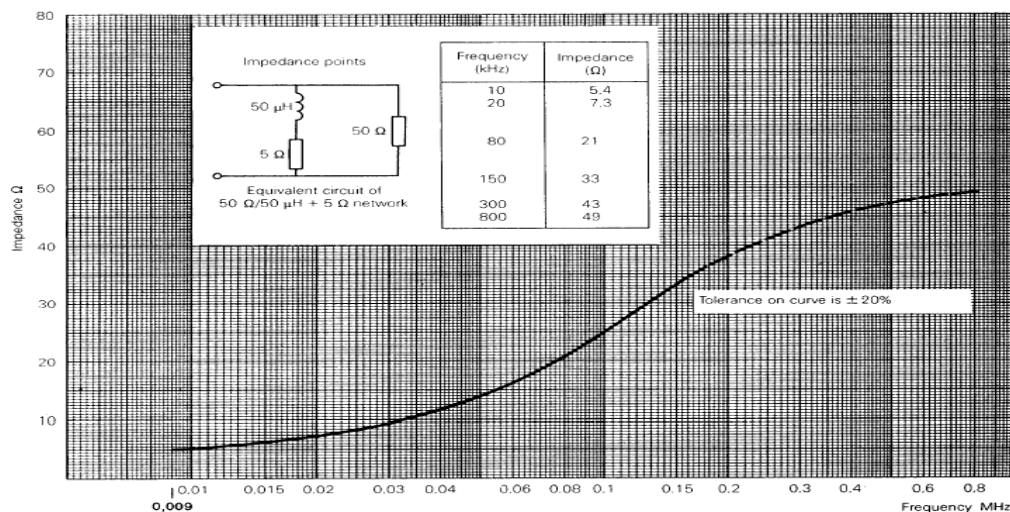


Fig 2. Impedance of LISN



### 4.3 Radiated Emission

The measurements were conducted 3 m anechoic chamber (FCC Registration No.: 443957) using broadband antennas to determine the frequency producing the maximum EME. Appropriate precaution was taken to ensure that all EME from the EUT were maximized and investigated. The technology configuration, mode of operation and turntable azimuth with respect to antenna was note for each frequency found.

The spectrum was scanned from 30 to 1000 MHz, using bicornical log antenna (Schwarzbeck, VULB9160).

Above 1 GHz, horn antenna (Schwarzbeck, BBHA9120D / EMCO 3160) was used.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition.

Each frequency found during pre-scan measurements was re-examined and investigated using EMI test receiver. The detector function was set to CISPR quasi-peak mode average mode and the bandwidth of the receiver was set to 120 kHz or 1MHz depending on the frequency or type of signal.

The EUT, support equipment and interconnecting cables were reconfigured to the setup producing the maximum emission for the frequency and were placed on top of a 0.8 m high non-metallic 1.0 m × 1.5 m table.

The turntable containing the test sample was rotated; the antenna height was varied 1 m to 4 m and stopped at the azimuth or height producing the maximum emission.

Each EME reported was calibrated using the R/S signal generator

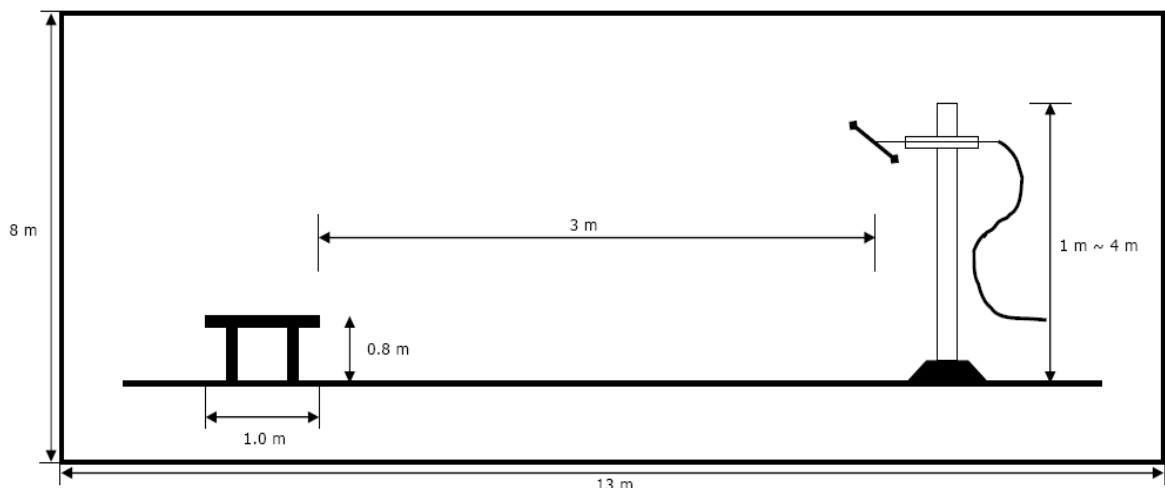


Fig 3. Dimensions of test site.



## 5. Conducted Emission

### 5.1 Operating Environment

Temperature : 23 °C  
Relative Humidity : 41 % R.H.

### 5.2 Test Set-up

The conducted emission measurements were performed in the shielded room.

The EUT was placed on wooden table, 0.8 m heights above the floor, 0.4 m from the reference ground plane (GRP) wall and 0.8 m from AMN.

AMN is bonded on horizontal reference ground plane.

The ground plane, which was electrically bonded to the shield room, ground system and all power lines entering the shield room, were filtered.

### 5.3 Measurement Uncertainty

The measurement uncertainty was calculated in accordance with ISO “Guide to the expression of uncertainty in measurement.”

The measurement uncertainty was given with a confidence of 95 %.

Test Items	Uncertainty	Remark
Conducted emission (9 kHz ~ 150 kHz)	$\pm 2.97$ dB	Confidence levels of 95 % (k=2)
Conducted emission (150 kHz ~ 30 MHz)	$\pm 4.05$ dB	Confidence levels of 95 % (k=2)



#### 5.4 Limit

RFI Conducted	FCC Limit(dB) Class B	
Freq. Range	Quasi-Peak	Average
150 kHz ~ 0.5 MHz	66 ~ 56*	56 ~ 46*
0.5 MHz ~ 5 MHz	56	46
5 MHz ~ 30 MHz	60	50
*Limits decreases linearly with the logarithm of frequency.		

#### 5.5 Test Equipment used

Model Name	Manufacturer	Description	Serial Number	Due to Calibration
■ - ESCS30	Rohde & Schwarz	EMI test receiver	839809/003	12. 13. 2009
■ - ESH3-Z5	Rohde & Schwarz	LISN	838979/020	12. 12. 2009
■ - ESH2-Z5	Rohde & Schwarz	LISN	829991/009	12. 12. 2009

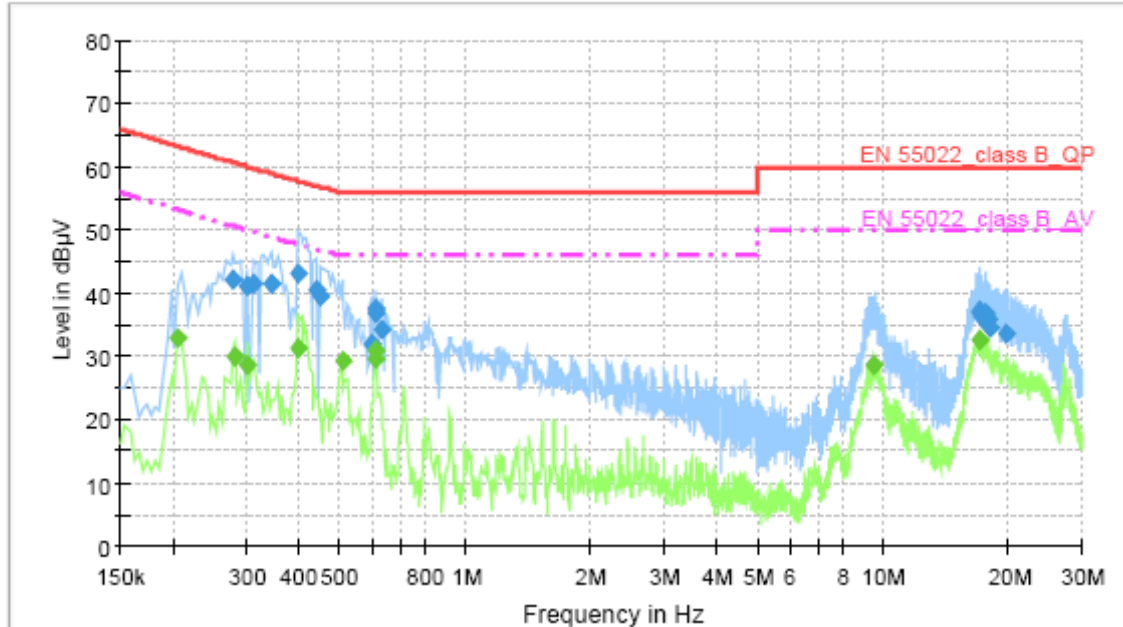
#### 5.6 Test data for Conducted Emission

- . Test Date : April 27, 2009  
- . Resolution Bandwidth : 9 kHz  
- . Frequency Range : 0.15 MHz ~ 30 MHz



◆ Test resolution: 1 024 \* 768 / 60 Hz (RGB: Analog mode)

## Voltage with 4-Line-LISN\_L1



### Final Measurement Detector 1

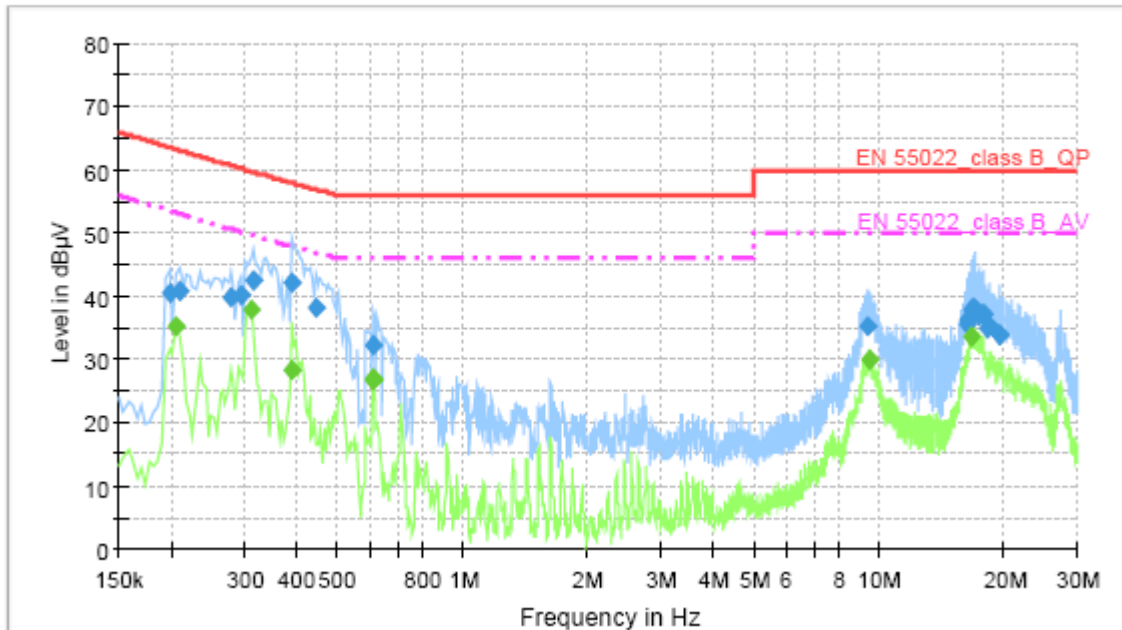
Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.278000	42.2	1000.000	9.000	GND	L1	10.0	18.5	60.7	
0.302000	41.2	1000.000	9.000	GND	L1	10.0	18.8	60.0	
0.310000	41.6	1000.000	9.000	GND	L1	10.0	18.2	59.8	
0.346000	41.5	1000.000	9.000	GND	L1	10.0	17.4	58.9	
0.398000	43.3	1000.000	9.000	GND	L1	10.0	14.5	57.8	
0.442000	40.6	1000.000	9.000	GND	L1	10.0	16.4	57.0	
0.454000	39.4	1000.000	9.000	GND	L1	10.0	17.3	56.7	
0.598000	32.0	1000.000	9.000	GND	L1	10.0	24.0	56.0	
0.610000	37.6	1000.000	9.000	GND	L1	10.0	18.4	56.0	
0.614000	37.0	1000.000	9.000	GND	L1	10.0	19.0	56.0	
0.630000	34.4	1000.000	9.000	GND	L1	10.0	21.6	56.0	
17.006000	37.3	1000.000	9.000	GND	L1	10.7	22.7	60.0	
17.102000	36.9	1000.000	9.000	GND	L1	10.7	23.1	60.0	
17.302000	36.3	1000.000	9.000	GND	L1	10.7	23.7	60.0	
17.506000	36.7	1000.000	9.000	GND	L1	10.7	23.3	60.0	
17.606000	36.7	1000.000	9.000	GND	L1	10.7	23.3	60.0	
17.718000	36.8	1000.000	9.000	GND	L1	10.7	23.2	60.0	
17.978000	35.8	1000.000	9.000	GND	L1	10.7	24.2	60.0	
18.166000	34.5	1000.000	9.000	GND	L1	10.7	25.5	60.0	
19.790000	33.5	1000.000	9.000	GND	L1	10.8	26.5	60.0	

### Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.206000	33.1	1000.000	9.000	GND	L1	9.9	20.1	53.2	
0.282000	30.1	1000.000	9.000	GND	L1	10.0	20.4	50.5	
0.302000	28.8	1000.000	9.000	GND	L1	10.0	21.1	49.9	
0.398000	31.2	1000.000	9.000	GND	L1	10.0	16.5	47.7	
0.510000	29.3	1000.000	9.000	GND	L1	10.0	16.7	46.0	
0.610000	31.0	1000.000	9.000	GND	L1	10.0	15.0	46.0	
0.614000	29.8	1000.000	9.000	GND	L1	10.0	16.2	46.0	
9.574000	28.8	1000.000	9.000	GND	L1	10.3	21.2	50.0	
17.022000	32.6	1000.000	9.000	GND	L1	10.7	17.4	50.0	



## Voltage with 4-Line-LISN\_N



### Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.198000	40.6	1000.000	9.000	GND	N	9.9	22.9	63.5	
0.210000	41.0	1000.000	9.000	GND	N	9.9	22.0	63.0	
0.278000	40.0	1000.000	9.000	GND	N	10.0	20.7	60.7	
0.294000	40.2	1000.000	9.000	GND	N	10.0	20.0	60.2	
0.314000	42.5	1000.000	9.000	GND	N	10.0	17.2	59.7	
0.390000	42.3	1000.000	9.000	GND	N	10.0	15.6	57.9	
0.446000	38.2	1000.000	9.000	GND	N	10.0	18.7	56.9	
0.614000	32.1	1000.000	9.000	GND	N	10.0	23.9	56.0	
9.394000	35.4	1000.000	9.000	GND	N	10.3	24.6	60.0	
16.306000	35.7	1000.000	9.000	GND	N	10.6	24.3	60.0	
16.410000	36.3	1000.000	9.000	GND	N	10.6	23.7	60.0	
16.702000	38.0	1000.000	9.000	GND	N	10.6	22.0	60.0	
16.962000	38.2	1000.000	9.000	GND	N	10.6	21.8	60.0	
17.082000	37.9	1000.000	9.000	GND	N	10.6	22.1	60.0	
17.430000	37.0	1000.000	9.000	GND	N	10.6	23.0	60.0	
17.838000	37.1	1000.000	9.000	GND	N	10.6	22.9	60.0	
18.246000	34.9	1000.000	9.000	GND	N	10.6	25.1	60.0	
18.426000	35.3	1000.000	9.000	GND	N	10.6	24.7	60.0	
19.558000	33.9	1000.000	9.000	GND	N	10.7	26.1	60.0	
19.642000	33.8	1000.000	9.000	GND	N	10.7	26.2	60.0	

### Final Measurement Detector 2

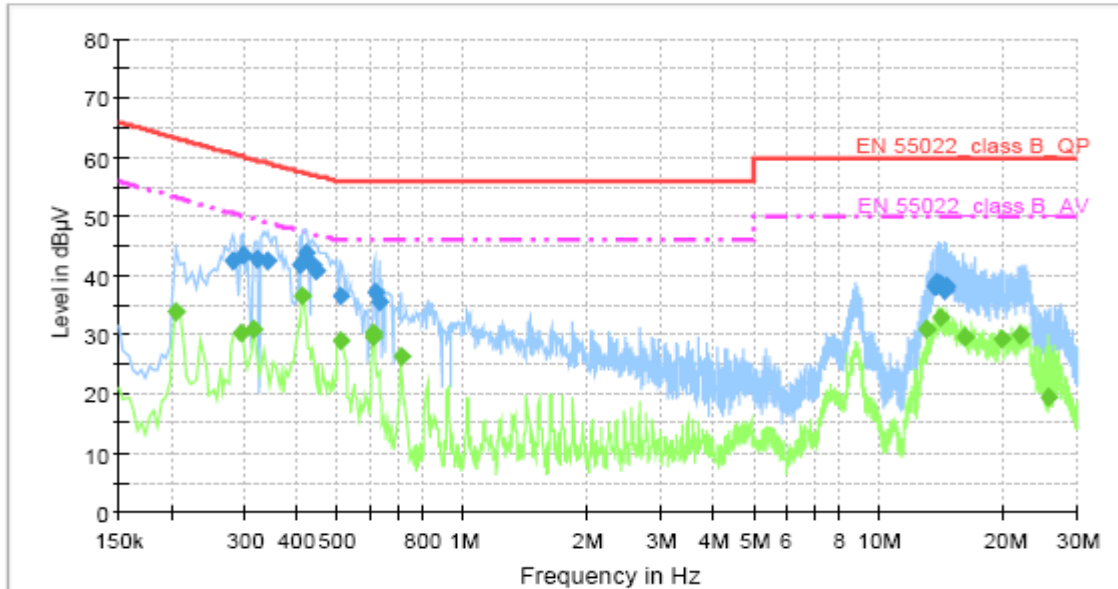
Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.206000	35.2	1000.000	9.000	GND	N	9.9	18.0	53.2	
0.310000	37.9	1000.000	9.000	GND	N	10.0	11.8	49.7	
0.390000	28.2	1000.000	9.000	GND	N	10.0	19.7	47.9	
0.610000	27.0	1000.000	9.000	GND	N	10.0	19.0	46.0	
0.614000	26.7	1000.000	9.000	GND	N	10.0	19.3	46.0	
9.566000	30.0	1000.000	9.000	GND	N	10.3	20.0	50.0	
16.786000	33.6	1000.000	9.000	GND	N	10.6	16.4	50.0	





◆ Test resolution: 1 024 \* 768/ 60 Hz (HDMI/DVI: Digital mode)

## Voltage with 4-Line-LISN\_L1



### Final Measurement Detector 1

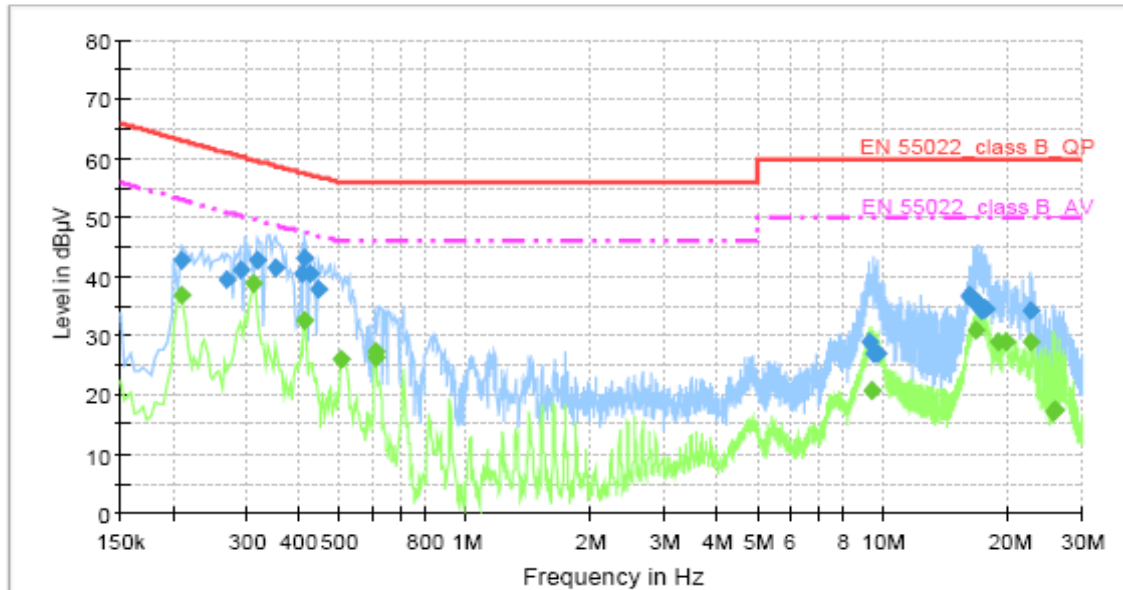
Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.282000	42.6	1000.000	9.000	GND	L1	10.0	18.0	60.6	
0.298000	43.5	1000.000	9.000	GND	L1	10.0	16.6	60.1	
0.322000	42.6	1000.000	9.000	GND	L1	10.0	16.9	59.5	
0.342000	42.6	1000.000	9.000	GND	L1	10.0	16.4	59.0	
0.406000	41.8	1000.000	9.000	GND	L1	10.0	15.8	57.6	
0.422000	43.9	1000.000	9.000	GND	L1	10.0	13.4	57.3	
0.438000	41.7	1000.000	9.000	GND	L1	10.0	15.3	57.0	
0.446000	40.7	1000.000	9.000	GND	L1	10.0	16.2	56.9	
0.510000	36.6	1000.000	9.000	GND	L1	10.0	19.4	56.0	
0.618000	37.3	1000.000	9.000	GND	L1	10.0	18.7	56.0	
0.630000	35.6	1000.000	9.000	GND	L1	10.0	20.4	56.0	
13.658000	38.2	1000.000	9.000	GND	L1	10.5	21.8	60.0	
13.798000	38.1	1000.000	9.000	GND	L1	10.5	21.9	60.0	
13.878000	38.9	1000.000	9.000	GND	L1	10.5	21.1	60.0	
13.950000	38.5	1000.000	9.000	GND	L1	10.6	21.5	60.0	
14.102000	38.4	1000.000	9.000	GND	L1	10.6	21.6	60.0	
14.410000	37.6	1000.000	9.000	GND	L1	10.6	22.4	60.0	
14.430000	37.6	1000.000	9.000	GND	L1	10.6	22.4	60.0	
14.454000	37.9	1000.000	9.000	GND	L1	10.6	22.1	60.0	
14.566000	38.1	1000.000	9.000	GND	L1	10.6	21.9	60.0	

### Final Measurement Detector 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.206000	33.9	1000.000	9.000	GND	L1	9.9	19.3	53.2	
0.294000	30.4	1000.000	9.000	GND	L1	10.0	19.8	50.2	
0.314000	31.0	1000.000	9.000	GND	L1	10.0	18.6	49.6	
0.414000	36.6	1000.000	9.000	GND	L1	10.0	10.8	47.4	
0.510000	28.9	1000.000	9.000	GND	L1	10.0	17.1	46.0	
0.610000	30.4	1000.000	9.000	GND	L1	10.0	15.6	46.0	
0.614000	29.8	1000.000	9.000	GND	L1	10.0	16.2	46.0	
0.714000	26.2	1000.000	9.000	GND	L1	10.0	19.8	46.0	
13.034000	30.8	1000.000	9.000	GND	L1	10.5	19.2	50.0	
14.102000	33.0	1000.000	9.000	GND	L1	10.6	17.0	50.0	
16.214000	29.7	1000.000	9.000	GND	L1	10.7	20.3	50.0	
19.878000	29.4	1000.000	9.000	GND	L1	10.8	20.6	50.0	
21.838000	29.9	1000.000	9.000	GND	L1	10.9	20.1	50.0	
25.674000	19.3	1000.000	9.000	GND	L1	11.0	30.7	50.0	



## Voltage with 4-Line-LISN\_N



### Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.210000	42.8	1000.000	9.000	GND	N	9.9	20.2	63.0	
0.270000	39.6	1000.000	9.000	GND	N	10.0	21.3	60.9	
0.290000	41.3	1000.000	9.000	GND	N	10.0	19.0	60.3	
0.318000	42.7	1000.000	9.000	GND	N	10.0	16.9	59.6	
0.354000	41.6	1000.000	9.000	GND	N	10.0	17.1	58.7	
0.406000	40.5	1000.000	9.000	GND	N	10.0	17.1	57.6	
0.414000	43.3	1000.000	9.000	GND	N	10.0	14.2	57.5	
0.426000	40.4	1000.000	9.000	GND	N	10.0	16.8	57.2	
0.446000	37.7	1000.000	9.000	GND	N	10.0	19.2	56.9	
9.338000	28.9	1000.000	9.000	GND	N	10.3	31.1	60.0	
9.502000	27.1	1000.000	9.000	GND	N	10.3	32.9	60.0	
9.738000	27.0	1000.000	9.000	GND	N	10.3	33.0	60.0	
16.146000	36.5	1000.000	9.000	GND	N	10.6	23.5	60.0	
16.206000	36.9	1000.000	9.000	GND	N	10.6	23.1	60.0	
16.278000	36.5	1000.000	9.000	GND	N	10.6	23.5	60.0	
16.598000	35.9	1000.000	9.000	GND	N	10.6	24.1	60.0	
16.854000	35.7	1000.000	9.000	GND	N	10.6	24.3	60.0	
17.294000	34.3	1000.000	9.000	GND	N	10.6	25.7	60.0	
17.778000	34.6	1000.000	9.000	GND	N	10.6	25.4	60.0	
22.706000	34.2	1000.000	9.000	GND	N	10.8	25.8	60.0	

### Final Measurement Detector 2

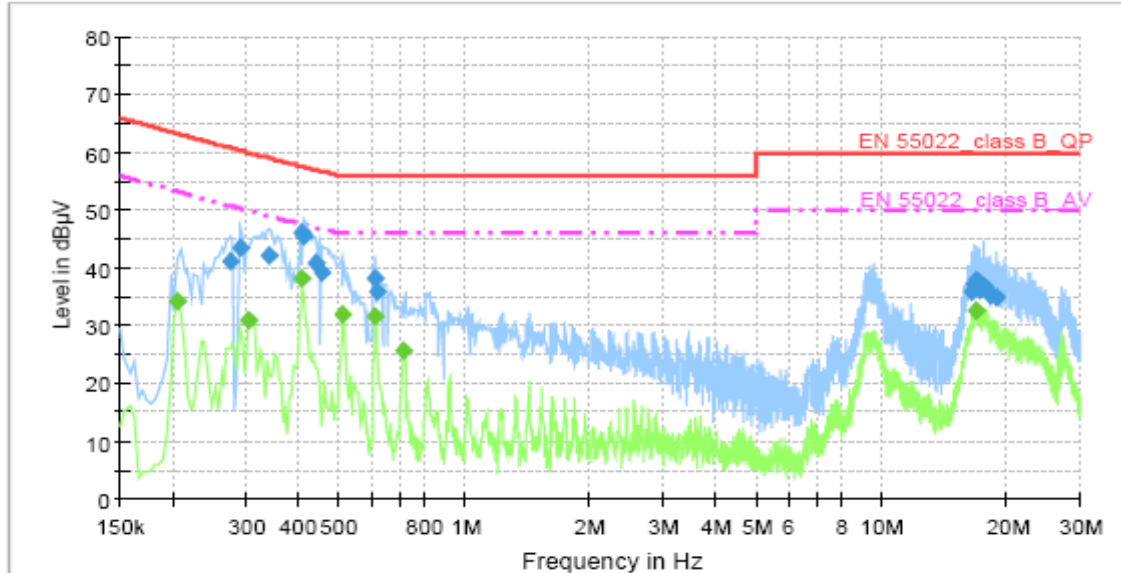
Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.210000	36.8	1000.000	9.000	GND	N	9.9	16.2	53.0	
0.310000	38.7	1000.000	9.000	GND	N	10.0	11.0	49.7	
0.414000	32.6	1000.000	9.000	GND	N	10.0	14.8	47.4	
0.506000	26.1	1000.000	9.000	GND	N	10.0	19.9	46.0	
0.610000	27.4	1000.000	9.000	GND	N	10.0	18.6	46.0	
0.614000	26.4	1000.000	9.000	GND	N	10.0	19.6	46.0	
9.462000	20.9	1000.000	9.000	GND	N	10.3	29.1	50.0	
16.802000	31.1	1000.000	9.000	GND	N	10.6	18.9	50.0	
18.814000	28.9	1000.000	9.000	GND	N	10.7	21.1	50.0	
19.750000	29.1	1000.000	9.000	GND	N	10.7	20.9	50.0	
22.762000	28.9	1000.000	9.000	GND	N	10.8	21.1	50.0	
25.766000	17.1	1000.000	9.000	GND	N	10.8	32.9	50.0	
25.994000	17.6	1000.000	9.000	GND	N	10.8	32.4	50.0	





◆ Test resolution: 800 \* 600 / 60 Hz (RGB: Analog mode)

## Voltage with 4-Line-LISN\_L1



### Final Measurement Detector 1

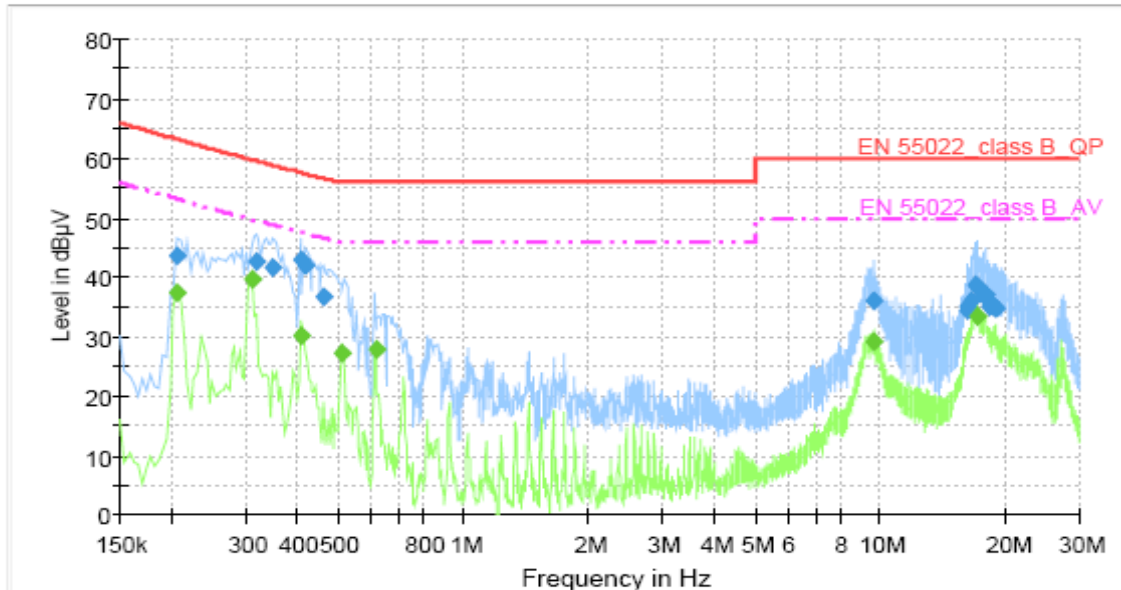
Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.274000	41.1	1000.000	9.000	GND	L1	10.0	19.7	60.8	
0.290000	43.4	1000.000	9.000	GND	L1	10.0	16.9	60.3	
0.342000	42.0	1000.000	9.000	GND	L1	10.0	17.0	59.0	
0.406000	46.1	1000.000	9.000	GND	L1	10.0	11.5	57.6	
0.414000	45.4	1000.000	9.000	GND	L1	10.0	12.1	57.5	
0.442000	40.9	1000.000	9.000	GND	L1	10.0	16.1	57.0	
0.458000	39.2	1000.000	9.000	GND	L1	10.0	17.5	56.7	
0.614000	38.2	1000.000	9.000	GND	L1	10.0	17.8	56.0	
0.622000	35.8	1000.000	9.000	GND	L1	10.0	20.2	56.0	
16.546000	35.7	1000.000	9.000	GND	L1	10.7	24.3	60.0	
16.730000	37.2	1000.000	9.000	GND	L1	10.7	22.8	60.0	
16.918000	37.8	1000.000	9.000	GND	L1	10.7	22.2	60.0	
17.122000	37.6	1000.000	9.000	GND	L1	10.7	22.4	60.0	
17.250000	36.9	1000.000	9.000	GND	L1	10.7	23.1	60.0	
17.330000	36.1	1000.000	9.000	GND	L1	10.7	23.9	60.0	
17.586000	36.4	1000.000	9.000	GND	L1	10.7	23.6	60.0	
17.642000	36.6	1000.000	9.000	GND	L1	10.7	23.4	60.0	
17.734000	36.8	1000.000	9.000	GND	L1	10.7	23.2	60.0	
18.214000	35.1	1000.000	9.000	GND	L1	10.7	24.9	60.0	
18.878000	34.8	1000.000	9.000	GND	L1	10.8	25.2	60.0	

### Final Measurement Detector 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.206000	34.3	1000.000	9.000	GND	L1	9.9	18.9	53.2	
0.306000	30.9	1000.000	9.000	GND	L1	10.0	18.9	49.8	
0.410000	38.0	1000.000	9.000	GND	L1	10.0	9.5	47.5	
0.514000	32.0	1000.000	9.000	GND	L1	10.0	14.0	46.0	
0.614000	31.7	1000.000	9.000	GND	L1	10.0	14.3	46.0	
0.718000	25.8	1000.000	9.000	GND	L1	10.0	20.2	46.0	
16.842000	32.7	1000.000	9.000	GND	L1	10.7	17.3	50.0	



## Voltage with 4-Line-LISN N



### Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.206000	43.5	1000.000	9.000	GND	N	9.9	19.7	63.2	
0.318000	42.6	1000.000	9.000	GND	N	10.0	17.0	59.6	
0.350000	41.6	1000.000	9.000	GND	N	10.0	17.2	58.8	
0.406000	43.0	1000.000	9.000	GND	N	10.0	14.6	57.6	
0.418000	41.9	1000.000	9.000	GND	N	10.0	15.5	57.4	
0.462000	36.7	1000.000	9.000	GND	N	10.0	19.9	56.6	
9.594000	36.1	1000.000	9.000	GND	N	10.3	23.9	60.0	
16.174000	34.5	1000.000	9.000	GND	N	10.6	25.5	60.0	
16.206000	35.1	1000.000	9.000	GND	N	10.6	24.9	60.0	
16.486000	36.0	1000.000	9.000	GND	N	10.6	24.0	60.0	
16.818000	38.7	1000.000	9.000	GND	N	10.6	21.3	60.0	
17.110000	38.5	1000.000	9.000	GND	N	10.6	21.5	60.0	
17.614000	37.1	1000.000	9.000	GND	N	10.6	22.9	60.0	
17.702000	37.1	1000.000	9.000	GND	N	10.6	22.9	60.0	
17.846000	37.1	1000.000	9.000	GND	N	10.6	22.9	60.0	
18.194000	35.9	1000.000	9.000	GND	N	10.6	24.1	60.0	
18.290000	35.1	1000.000	9.000	GND	N	10.6	24.9	60.0	
18.302000	35.0	1000.000	9.000	GND	N	10.6	25.0	60.0	
18.730000	35.1	1000.000	9.000	GND	N	10.7	24.9	60.0	
19.010000	34.9	1000.000	9.000	GND	N	10.7	25.1	60.0	

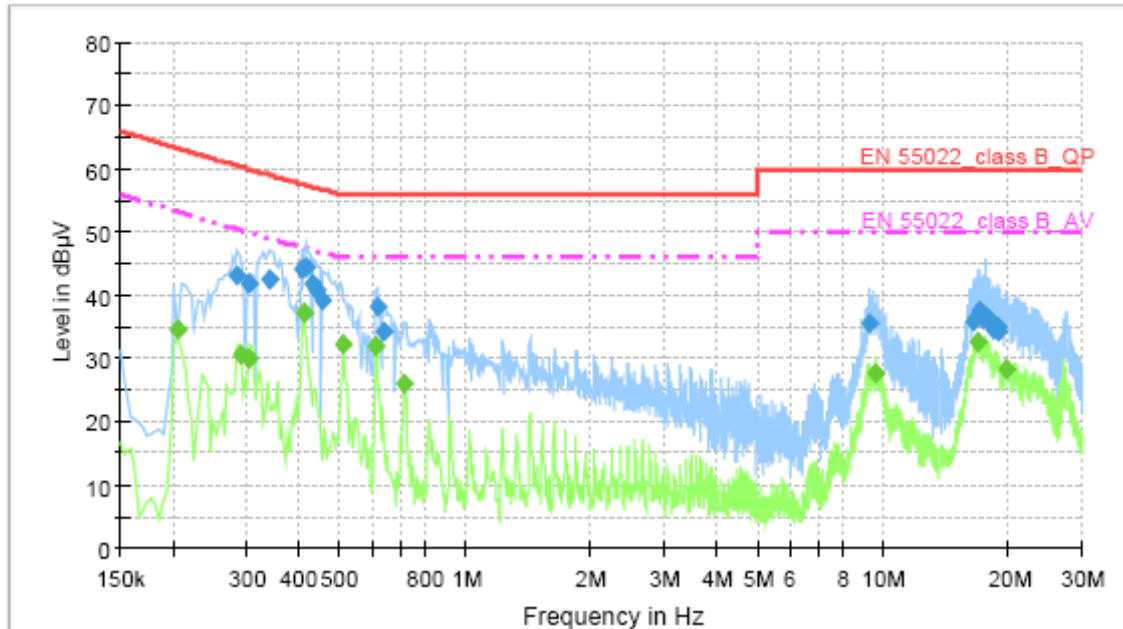
### Final Measurement Detector 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.206000	37.4	1000.000	9.000	GND	N	9.9	15.8	53.2	
0.310000	39.8	1000.000	9.000	GND	N	10.0	9.9	49.7	
0.406000	30.0	1000.000	9.000	GND	N	10.0	17.6	47.6	
0.510000	27.3	1000.000	9.000	GND	N	10.0	18.7	46.0	
0.618000	28.0	1000.000	9.000	GND	N	10.0	18.0	46.0	
9.594000	29.3	1000.000	9.000	GND	N	10.3	20.7	50.0	
17.002000	33.6	1000.000	9.000	GND	N	10.6	16.4	50.0	



◆ Test resolution: 640 \* 480 / 60 Hz (RGB: Analog mode)

## Voltage with 4-Line-LISN\_L1



### Final Measurement Detector 1

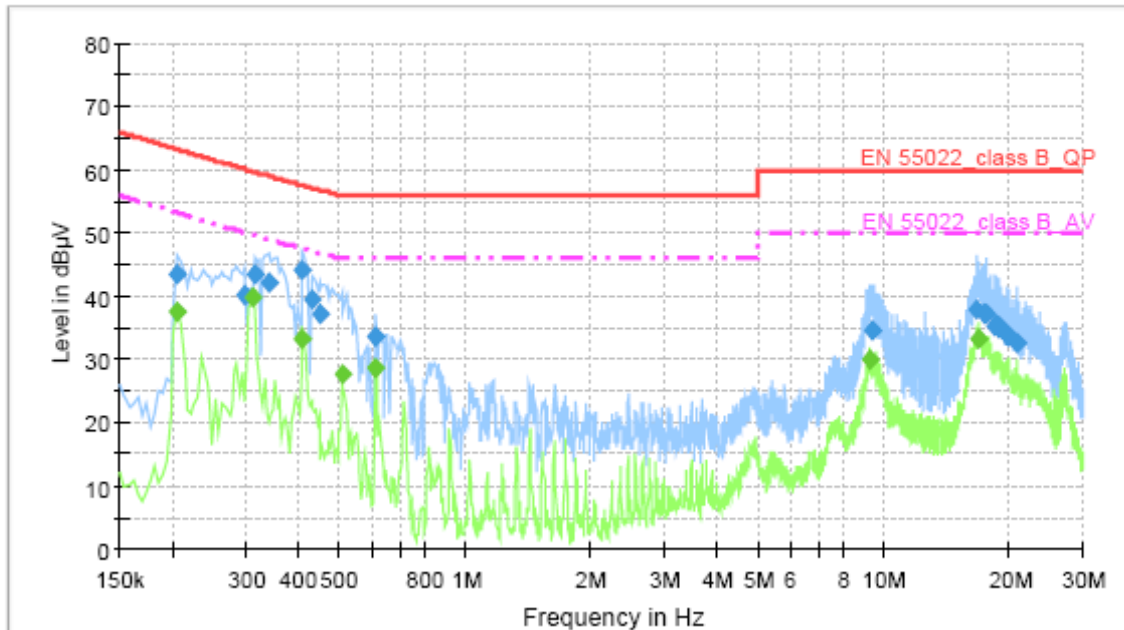
Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.286000	43.2	1000.000	9.000	GND	L1	10.0	17.2	60.4	
0.306000	41.9	1000.000	9.000	GND	L1	10.0	18.0	59.9	
0.342000	42.4	1000.000	9.000	GND	L1	10.0	16.6	59.0	
0.406000	44.3	1000.000	9.000	GND	L1	10.0	13.3	57.6	
0.418000	44.4	1000.000	9.000	GND	L1	10.0	13.0	57.4	
0.434000	41.9	1000.000	9.000	GND	L1	10.0	15.2	57.1	
0.442000	40.9	1000.000	9.000	GND	L1	10.0	16.1	57.0	
0.458000	39.3	1000.000	9.000	GND	L1	10.0	17.4	56.7	
0.618000	38.1	1000.000	9.000	GND	L1	10.0	17.9	56.0	
0.642000	34.2	1000.000	9.000	GND	L1	10.0	21.8	56.0	
9.322000	35.5	1000.000	9.000	GND	L1	10.3	24.5	60.0	
16.558000	35.9	1000.000	9.000	GND	L1	10.7	24.1	60.0	
17.030000	37.5	1000.000	9.000	GND	L1	10.7	22.5	60.0	
17.442000	36.3	1000.000	9.000	GND	L1	10.7	23.7	60.0	
17.702000	36.5	1000.000	9.000	GND	L1	10.7	23.5	60.0	
17.902000	36.2	1000.000	9.000	GND	L1	10.7	23.8	60.0	
18.026000	35.9	1000.000	9.000	GND	L1	10.7	24.1	60.0	
18.458000	34.5	1000.000	9.000	GND	L1	10.8	25.5	60.0	
18.942000	34.9	1000.000	9.000	GND	L1	10.8	25.1	60.0	
19.014000	34.4	1000.000	9.000	GND	L1	10.8	25.6	60.0	

### Final Measurement Detector 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.206000	34.5	1000.000	9.000	GND	L1	9.9	18.7	53.2	
0.290000	30.6	1000.000	9.000	GND	L1	10.0	19.7	50.3	
0.306000	30.0	1000.000	9.000	GND	L1	10.0	19.8	49.8	
0.414000	37.1	1000.000	9.000	GND	L1	10.0	10.3	47.4	
0.514000	32.2	1000.000	9.000	GND	L1	10.0	13.8	46.0	
0.614000	31.9	1000.000	9.000	GND	L1	10.0	14.1	46.0	
0.718000	26.1	1000.000	9.000	GND	L1	10.0	19.9	46.0	
9.622000	27.8	1000.000	9.000	GND	L1	10.3	22.2	50.0	
16.882000	32.6	1000.000	9.000	GND	L1	10.7	17.4	50.0	
19.882000	28.4	1000.000	9.000	GND	L1	10.8	21.6	50.0	



## Voltage with 4-Line-LISN\_N



### Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.206000	43.5	1000.000	9.000	GND	N	9.9	19.7	63.2	
0.298000	40.3	1000.000	9.000	GND	N	10.0	19.8	60.1	
0.314000	43.6	1000.000	9.000	GND	N	10.0	16.1	59.7	
0.342000	42.3	1000.000	9.000	GND	N	10.0	16.7	59.0	
0.410000	44.1	1000.000	9.000	GND	N	10.0	13.4	57.5	
0.430000	39.6	1000.000	9.000	GND	N	10.0	17.6	57.2	
0.450000	37.4	1000.000	9.000	GND	N	10.0	19.4	56.8	
0.614000	33.5	1000.000	9.000	GND	N	10.0	22.5	56.0	
9.398000	34.4	1000.000	9.000	GND	N	10.3	25.6	60.0	
16.806000	37.9	1000.000	9.000	GND	N	10.6	22.1	60.0	
17.518000	37.1	1000.000	9.000	GND	N	10.6	22.9	60.0	
17.630000	37.3	1000.000	9.000	GND	N	10.6	22.7	60.0	
18.570000	35.1	1000.000	9.000	GND	N	10.6	24.9	60.0	
18.754000	35.4	1000.000	9.000	GND	N	10.7	24.6	60.0	
18.838000	35.3	1000.000	9.000	GND	N	10.7	24.7	60.0	
18.954000	35.0	1000.000	9.000	GND	N	10.7	25.0	60.0	
19.690000	33.9	1000.000	9.000	GND	N	10.7	26.1	60.0	
19.850000	34.0	1000.000	9.000	GND	N	10.7	26.0	60.0	
20.034000	33.7	1000.000	9.000	GND	N	10.7	26.3	60.0	
21.022000	32.7	1000.000	9.000	GND	N	10.8	27.3	60.0	

### Final Measurement Detector 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.206000	37.5	1000.000	9.000	GND	N	9.9	15.7	53.2	
0.310000	39.9	1000.000	9.000	GND	N	10.0	9.8	49.7	
0.410000	33.2	1000.000	9.000	GND	N	10.0	14.3	47.5	
0.510000	27.5	1000.000	9.000	GND	N	10.0	18.5	46.0	
0.614000	28.7	1000.000	9.000	GND	N	10.0	17.3	46.0	
9.330000	29.8	1000.000	9.000	GND	N	10.3	20.2	50.0	
16.914000	33.3	1000.000	9.000	GND	N	10.6	16.7	50.0	



## 6. Radiated Emission

### 6.1 Operating Environment

Temperature : 22 °C  
Relative Humidity : 41 % R.H.

### 6.2 Test Set-up

A preliminary and final measurement was at 3 m Anechoic chamber.

The EUT was placed on a non-conductive turntable approximately 0.8 m above the ground plane.

The turntable with EUT was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels.

This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

### 6.3 Measurement Uncertainty

The measurement uncertainty was calculated in accordance with ISO “Guide to the expression of uncertainty in measurement”.

The measurement uncertainty was given with a confidence of 95 %.

Test Items	Uncertainty	Remark
Radiated emission (30 MHz ~ 300 MHz, 3 m, Vertical)	± 3.54 dB	Confidence levels of 95 % (k=2)
Radiated emission (30 MHz ~ 300 MHz, 3 m, Horizontal)	± 3.49 dB	Confidence levels of 95 % (k=2)
Radiated emission (300 MHz ~ 1 000 MHz, 3 m, Vertical)	± 3.85 dB	Confidence levels of 95 % (k=2)
Radiated emission (300 MHz ~ 1 000 MHz, 3 m, Horizontal)	± 3.76 dB	Confidence levels of 95 % (k=2)
Radiated emission (30 MHz ~ 300 MHz, 10 m, Vertical)	± 3.21 dB	Confidence levels of 95 % (k=2)
Radiated emission (30 MHz ~ 300 MHz, 10 m, Horizontal)	± 3.32 dB	Confidence levels of 95 % (k=2)
Radiated emission (300 MHz ~ 1 000 MHz, 10 m, Vertical)	± 3.77 dB	Confidence levels of 95 % (k=2)
Radiated emission (300 MHz ~ 1 000 MHz, 10 m, Horizontal)	± 3.84 dB	Confidence levels of 95 % (k=2)



#### 6.4 Limit

Frequency (MHz)	FCC Limit @ 3 m. dB $\mu$ V/m	CISPR Limit @ 10 m. dB $\mu$ V/m
30 ~ 88	40.0	30.0
88 ~ 216	43.5	30.0
216 ~ 230	46.0	30.0
230 ~ 960	46.0	37.0
960 ~ 1 000	54.0	37.0
> 1 000	54.0	No Specified limit

#### 6.5 Test Equipment used

Model Name	Manufacturer	Description	Serial Number	Due to Calibration
■ - ESI	Rohde & Schwarz	EMI test receiver	830482/010	12. 14. 2009
■ - VULB9160	Schwarzbeck	Broadband Test ANT	3193	12. 11. 2009
■ - BBHA9120D	Schwarzbeck	Horn ANT	207	12. 26. 2009
■ - MCU066	Maturo GmbH	Position Controller	1390306	N/A
■ - AM 4.0	Maturo GmbH	Turntable	1390308	N/A
■ - TT2.5SI	Maturo GmbH	Antenna Mast	1390307	N/A
■ - AFS 44 00101800- 25-10P-44	MITEQ	Preamplifier	1258943	11. 11. 2009

#### 6.6 Test data for Radiated Emission

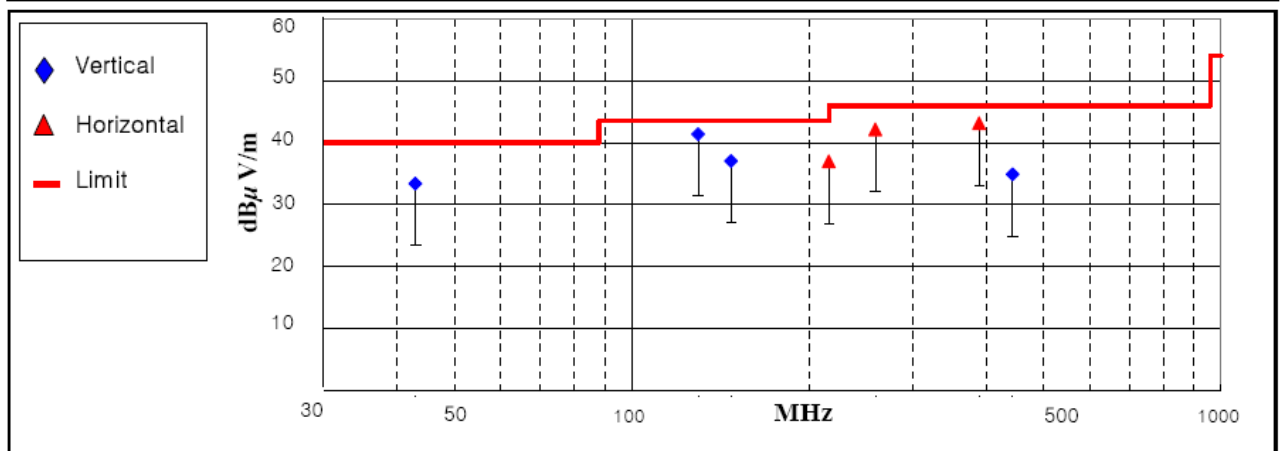
- Test Date : April 17, 2009
- Resolution Bandwidth : 120 kHz/ 1 MHz
- Frequency Range : 30 MHz ~ 2 000 MHz
- Measurement Distance : 3 m





- ◆ Operating Condition: 1 024 \* 768/ 60 Hz (RGB: Analog mode)  
Detector mode: Quasi- peak detector mode

Frequency (MHz)	Measurement Level				Limit (dB $\mu$ V/m)	Margin (dB)	Positioning System		
	Reading	Antenna	Cable	Test Result			Pol.	Height	Angle
	Value(dB $\mu$ V)	Factor(dB/m)	Loss(dB)	(dB $\mu$ V/m)			(H/V)	(cm)	(°)
42.98	20.31	11.82	1.26	33.39	40.00	6.61	V	102	42
129.60	27.72	11.88	1.79	41.39	43.50	2.11	V	110	201
147.50	22.29	12.64	2.08	37.01	43.50	6.49	V	123	13
215.97	24.54	9.93	2.52	36.99	43.50	6.51	H	300	116
259.21	27.86	11.46	2.81	42.13	46.00	3.87	H	310	41
388.80	25.23	14.58	3.32	43.13	46.00	2.87	H	302	50
443.00	15.29	16.10	3.49	34.88	46.00	11.12	V	222	201

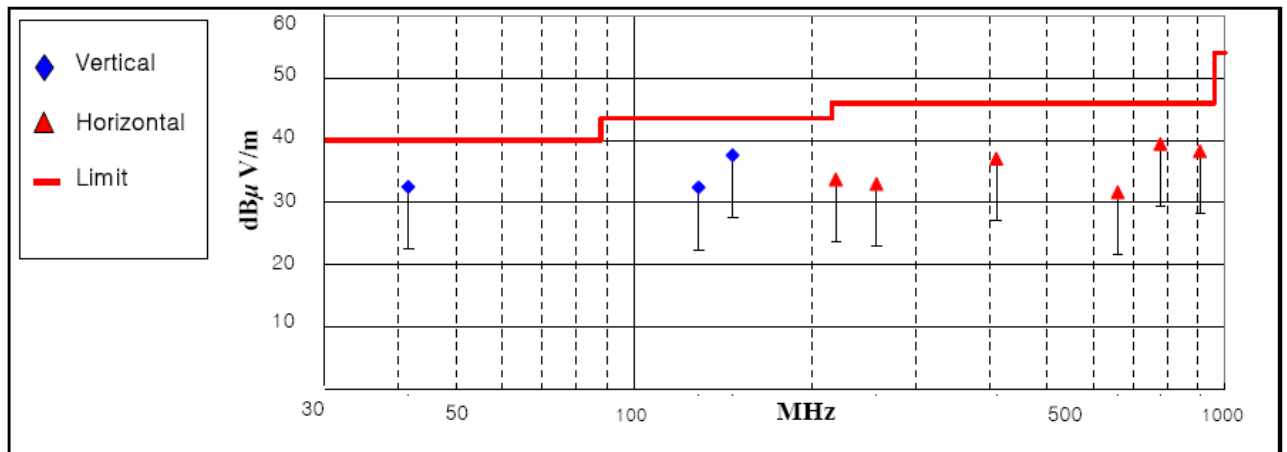


< Fig 4. Radiated emission result (30 MHz ~ 1 000 MHz)>



- ◆ Operating Condition: 1 024 \* 768/ 60 Hz (HDMI/DVI: Digital mode)  
Detector mode: Quasi- peak detector mode

Frequency (MHz)	Measurement Level				Limit (dB $\mu$ V/m)	Margin (dB)	Positioning System		
	Reading	Antenna	Cable	Test Result			Pol.	Height	Angle
	Value(dB $\mu$ V)	Factor(dB/m)	Loss(dB)	(dB $\mu$ V/m)			(H/V)	(cm)	(°)
41.56	19.63	11.66	1.23	32.52	40.00	7.48	V	116	41
128.80	18.80	11.82	1.79	32.41	43.50	11.09	V	103	169
146.95	22.89	12.64	2.06	37.59	43.50	5.91	V	100	201
219.63	21.08	10.06	2.55	33.69	46.00	12.31	H	210	265
257.39	18.77	11.40	2.80	32.97	46.00	13.03	H	200	253
410.43	18.51	15.11	3.40	37.02	46.00	8.98	H	201	290
658.45	7.64	19.57	4.42	31.63	46.00	14.37	H	213	210
777.58	12.91	21.53	4.97	39.41	46.00	6.59	H	286	33
907.25	10.24	22.53	5.45	38.22	46.00	7.78	H	216	21



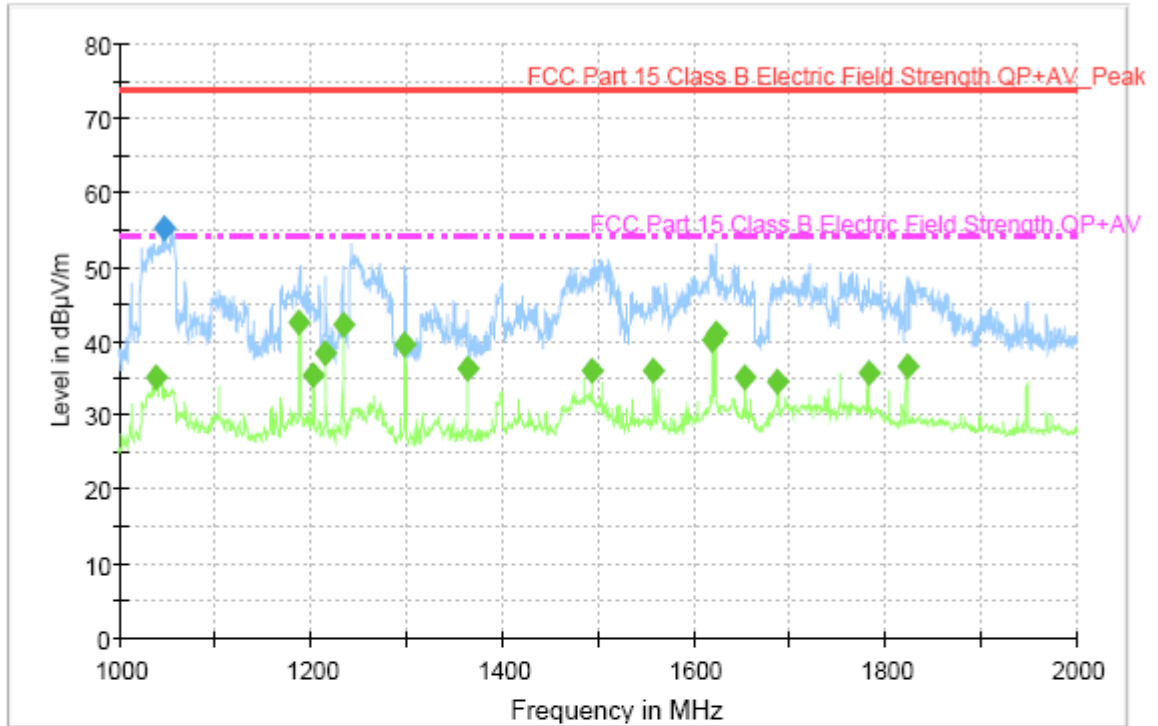
< Fig 5. Radiated emission result (30 MHz ~ 1 000 MHz)>





- ◆ Operating Condition: 1 024 \* 768/ 60 Hz (RGB: Analog mode)  
Detector mode: Peak detector mode / Average detector mode

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### Final Result 1

Frequency (MHz)	MaxPeak-MaxHold (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
1047.600000	55.1	300.0	V	180.0	-15.7	18.8	73.9	

### Final Result 2

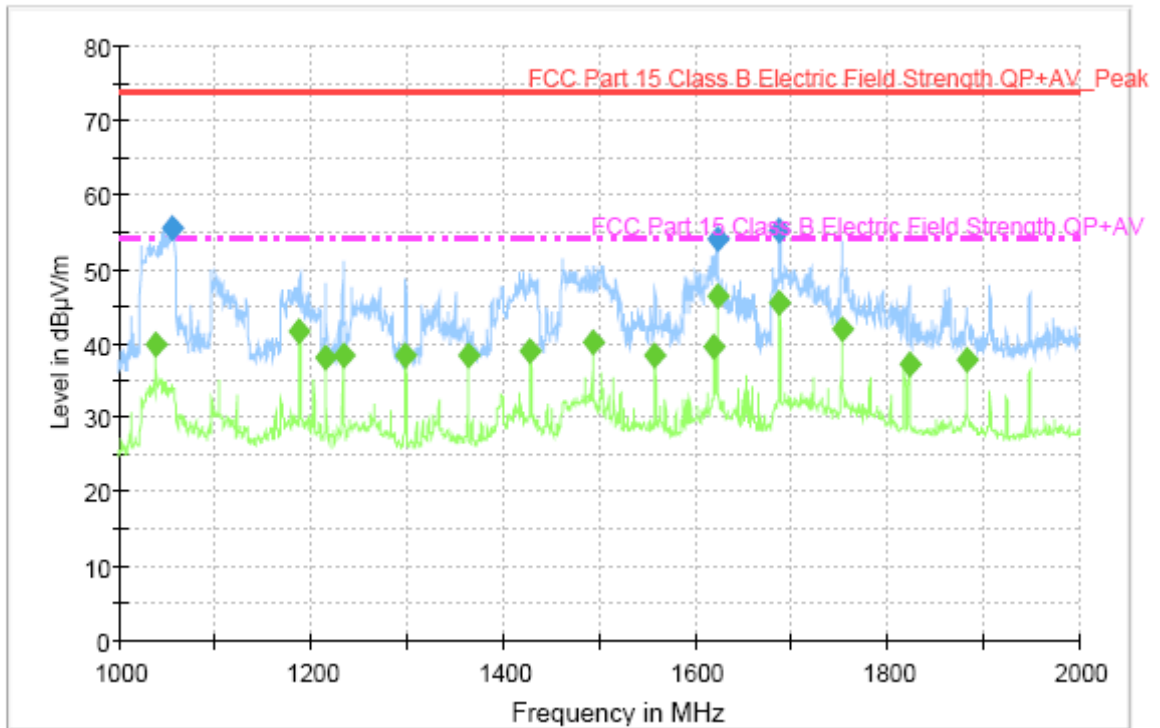
Frequency (MHz)	Average-MaxHold (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
1038.800000	35.2	100.0	V	180.0	-15.7	18.7	53.9	
1188.000000	42.5	200.0	V	0.0	-15.2	11.4	53.9	
1202.800000	35.5	200.0	V	0.0	-15.2	18.4	53.9	
1215.200000	38.4	300.0	H	180.0	-15.1	15.5	53.9	
1233.600000	42.1	100.0	V	180.0	-15.0	11.8	53.9	
1298.800000	39.6	100.0	H	90.0	-14.5	14.3	53.9	
1363.600000	36.3	200.0	H	180.0	-14.4	17.6	53.9	
1493.200000	35.9	200.0	V	180.0	-14.2	18.0	53.9	
1558.000000	36.0	100.0	H	270.0	-13.9	17.9	53.9	
1620.000000	40.2	100.0	H	180.0	-13.6	13.7	53.9	
1623.200000	41.1	200.0	H	180.0	-13.6	12.8	53.9	
1654.000000	35.2	100.0	V	0.0	-13.6	18.7	53.9	
1688.000000	34.5	200.0	H	180.0	-13.6	19.4	53.9	
1782.000000	35.7	200.0	V	0.0	-13.2	18.2	53.9	
1822.400000	36.6	100.0	H	180.0	-13.1	17.3	53.9	

< Fig 7. Radiated emission result (1 000 MHz ~ 2 000 MHz)>



- ◆ Operating Condition: 1 024 \* 768/ 60 Hz (HDMI/DVI: Digital mode)  
Detector mode: Peak detector mode / Average detector mode

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### Final Result 1

Frequency (MHz)	MaxPeak-MaxHold (dBμV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)	Comment
1054.800000	55.6	200.0	V	180.0	-15.7	18.3	73.9	
1623.200000	53.9	100.0	H	180.0	-13.6	20.0	73.9	
1688.000000	55.3	100.0	V	180.0	-13.6	18.6	73.9	

### Final Result 2

Frequency (MHz)	Average-MaxHold (dBμV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)	Comment
1038.800000	39.9	100.0	V	180.0	-15.7	14.0	53.9	
1188.000000	41.6	200.0	V	90.0	-15.2	12.3	53.9	
1215.200000	38.1	300.0	H	180.0	-15.1	15.8	53.9	
1233.600000	38.3	200.0	V	180.0	-15.0	15.6	53.9	
1298.400000	38.4	200.0	V	90.0	-14.5	15.5	53.9	
1363.600000	38.2	100.0	V	180.0	-14.4	15.7	53.9	
1428.400000	39.1	200.0	V	180.0	-14.3	14.8	53.9	
1493.200000	40.2	200.0	V	180.0	-14.2	13.7	53.9	
1558.400000	38.3	100.0	H	180.0	-13.9	15.6	53.9	
1620.000000	39.7	100.0	H	180.0	-13.6	14.2	53.9	
1623.200000	46.4	100.0	H	180.0	-13.6	7.5	53.9	
1688.000000	45.5	100.0	V	180.0	-13.6	8.4	53.9	
1753.200000	42.0	200.0	V	180.0	-13.3	11.9	53.9	
1822.400000	37.1	100.0	H	180.0	-13.1	16.8	53.9	
1882.800000	37.9	300.0	V	180.0	-13.0	16.0	53.9	

< Fig 8. Radiated emission result (1 000 MHz ~ 2 000 MHz)>



## 7. Sample Calculations

$$\begin{aligned} \text{dB}\mu\text{V} &= 20 \text{ Log}_{10}(\mu\text{V}/\text{m}) \\ \text{dB}\mu\text{V} &= \text{dBm} + 107 \\ \mu\text{V} &= 10^{(\text{dB}\mu\text{V}/20)} \end{aligned}$$

### 7.1 Example 1 :

#### ■ 20.3 MHz

$$\begin{aligned} \text{Class B Limit} &= 250 \mu\text{V} &= 48 \text{ dB}\mu\text{V} \\ \text{Reading} &= -67.8 \text{ dBm (Calibrated level)} \\ \text{Convert to dB}\mu\text{V} &= -67.8 \text{ dBm} + 107 &= 39.2 \text{ dB}\mu\text{V} \\ 10^{(39.2 \text{ dB}\mu\text{V}/20)} &= 91.2 \mu\text{V} \\ \text{Margin} &= 39.2 - 48 &= -8.8 \\ &= 8.8 \text{ dB below Limit} \end{aligned}$$

### 7.2 Example 2 :

#### ■ 66.7 MHz

$$\begin{aligned} \text{Class B Limit} &= 100 \mu\text{V}/\text{m} &= 40.0 \text{ dB}\mu\text{V}/\text{m} \\ \text{Reading} &= -76.0 \text{ dBm (Calibrated level)} \\ \text{Convert to dB}\mu\text{V}/\text{m} &= -76.0 \text{ dBm} + 107 &= 31.0 \text{ dB}\mu\text{V}/\text{m} \\ \text{Antenna Factor + Cable Loss} &= 5.8 \text{ dB} \\ \text{Total} &= 36.8 \text{ dB}\mu\text{V}/\text{m} \\ \text{Margin} &= 36.8 - 40.0 &= -3.2 \\ &= 3.2 \text{ dB below Limit} \end{aligned}$$



## 8. Recommendation & Conclusion

The data collected shows that the **KIMIN ELECTRONIC CO., LTD. LCD TV/Monitor (Model Name: LT42U55F, KLD-42NA)** was complies with §15.107 and 15.109 of the FCC Rules.