FCC EVALUATION REPORT FOR CERTIFICATION

Manufacturer : KIMIN ELECTRONIC CO., LTD.

293-4, Gongdan -dong, Gumi-si,

Gyeongbuk, Korea.

Attn : Mr. Se-bong Jang, General Manager

Date of Issue : May 11, 2009

Order Number: GETEC-C1-09-110

Test Report Number: GETEC-E3-09-058

Test Site: Gumi College EMC Center

FCC Registration Number: (100749, 443957)

FCC ID.: TGELT32U5

Applicant: KIMIN ELECTRONIC CO., LTD.

Rule Part(s)	**: FCC Part 15 Subpart B**
Equipment Class	**: Class B computing device peripheral (JBP)**
EUT Type	**: LCD TV/Monitor**
Type of Authority	**: Certification**
Model Name(Brand Name)	**: LT32U55H (KIMIN), HLD-320TB(HCT)**

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 vest 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,

Hyoung Seop Kim, Associate Engineer
GUMI College EMC center

Reviewed by,

Tae-Sig Park, Technical Manager
GUMI College EMC center

CONTENTS

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

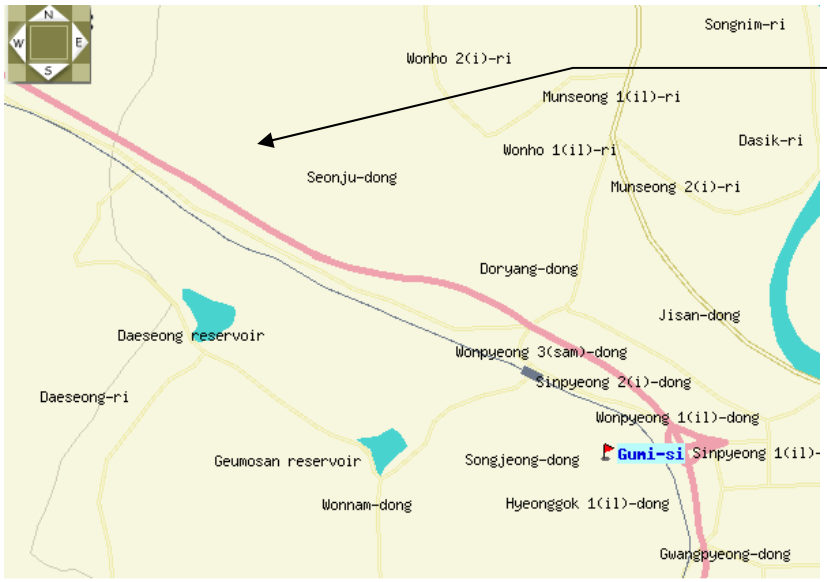
Applicant: KIMIN ELECTRONIC CO., LTD.
Applicant Address: 293-4, Gongdan-dong, Gumi-si, Gyeongbuk, Korea.
Manufacturer: KIMIN ELECTRONIC CO., LTD.
Manufacturer Address: 293-4, Gongdan-dong, Gumi-si, Gyeongbuk, Korea.
Contact Person: Mr. Se-bong Jang, General Manager
Tel Number: +82-54-462-0100
Fax Number: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

- **FCC ID.** TGELT32U5
- **EUT Type** LCD TV/Monitor
- **Model Name** LT32U55H (KIMIN), HLD-320TB(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** May 8 ~ 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-E3-09-058
- **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: LT32U55H, HLD-320TB)**

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)



GUMI COLLEGE EMC CENTER
407,Bugok-dong, Gumi-si,
Gyeongbuk 730-711, Korea.
Tel: +82-54-440-1195
Fax: +82-54-440-1199

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: LT32U55H, HLD-320TB) FCC ID.: TGELT32U5**

Model		HLD-320TB
Dimension (Width x Hight x Depth)	Without Stand	794.5mm (31.28") x 512.0mm (20.16") x 99.5mm (3.92")
	With Stand	794.5mm (31.28") x 573.0mm (22.56") x 228mm (8.98")
Weight (kg / lbs)	Without Stand	11.8 kg (26.01 lbs)
	With Stand	13.3 kg (29.32 lbs)
Broadcast Signal System		ATSC / NTSC
Receiving Channel		Air : 2 ~ 69, Cable : 1 ~ 135
Contrast Ratio		1,000:1
Brightness		500 cd/m²
Panel Resolution		1366 (H) x 768 (V)
Power Rating		AC100-240V ~50/60Hz
Consumption		130W
Audio Output		10W + 10W
Operating Temperature		0°C ~ 40°C
Accessories		• Batteries • Owner's Manual • Power Cord • Remote • 220V Adaptor Plug • Front Cover
External Port		• 2 x HDMI • AUDIO IN (RGB / DVI) • RGB IN(PC) • ANTENNA / CABLE IN • 2 x COMPONENT IN • DIGITAL AUDIO OUT (COAXIAL) • S-VIDEO IN • AC IN • AV IN

LCD Panel : LC320WXN (LG Display)

TV Tuner : DTVS205ER201A (SAMSUNG)

Maximum Frequency range : 166 MHz

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
Digital TV pattern generator	PI International	TPG430TB	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
Antenna cable	Connected to the EUT and TV signal generator	10 m shielded
S-Video cable	Connected to the EUT and DVD player	1.8 m shielded with two ferrite cores
Digital audio out cable	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

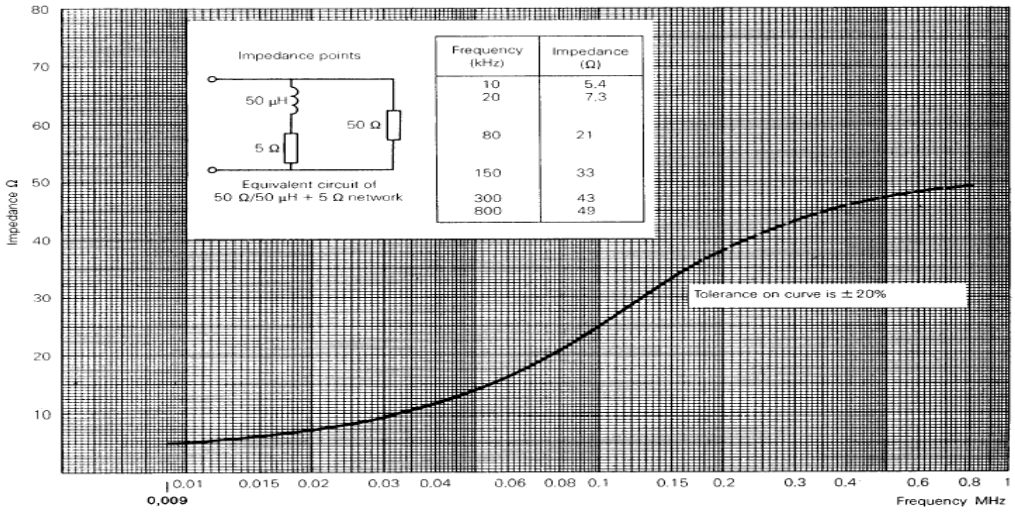


Fig 2. Impedance of LISN

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

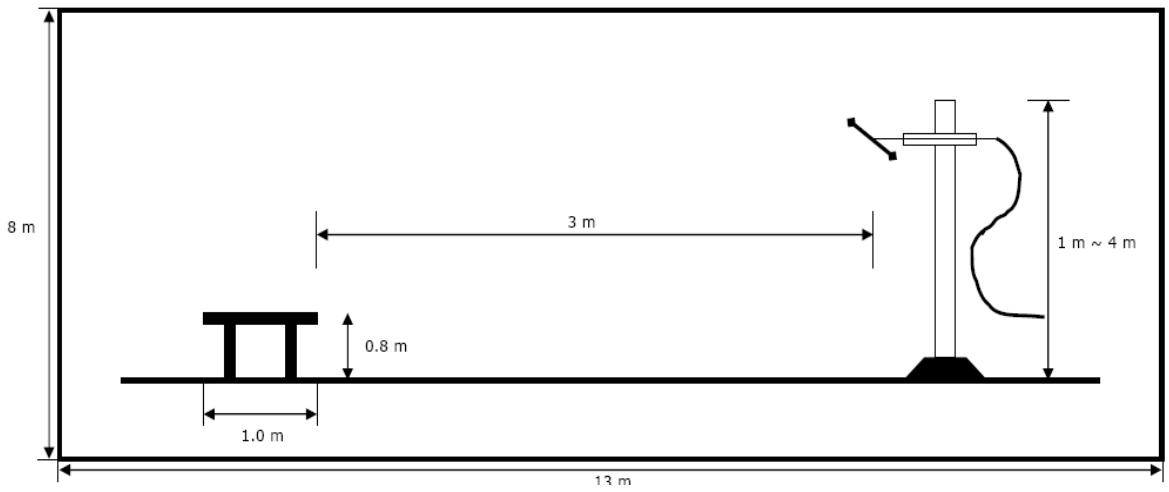


Fig 3. Dimensions of test site.

5. Conducted Emission

5.1 Operating Environment

Temperature : 26 ℃
Relative Humidity : 38 % 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)	± 2.97 dB	Confidence levels of 95 % (k=2)
Conducted emission (150 kHz ~ 30 MHz)	± 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

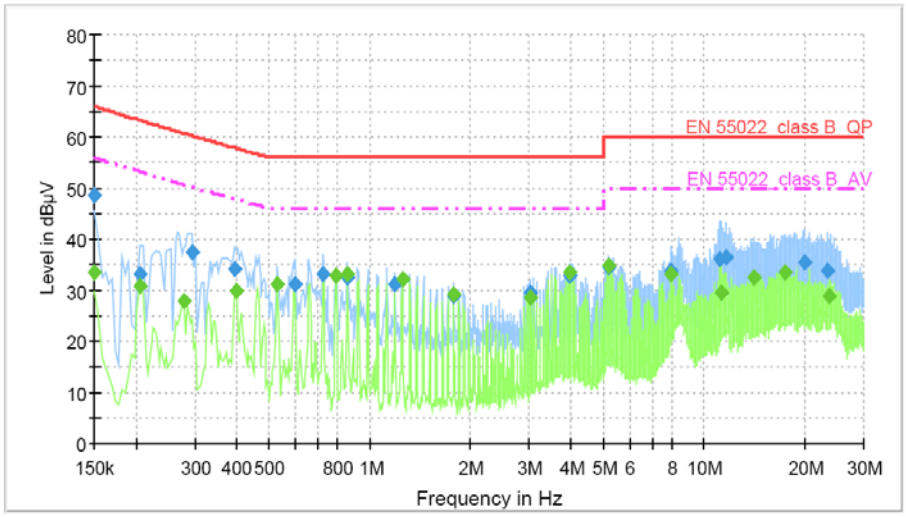
	Model Name	Manufacturer	Description	Serial Number	Due to Calibration
■ -	ESCS30	Rohde & Schwarz	EMI test receiver	839809/003	12. 13. 2009
■ -	ESH3-Z5	Rohde & Schwarz	LISN	838979/020	12. 12. 2009
■ -	ESH2-Z5	Rohde & Schwarz	LISN	829991/009	12. 12. 2009

5.6 Test data for Conducted Emission

-. Test Date : May 8, 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



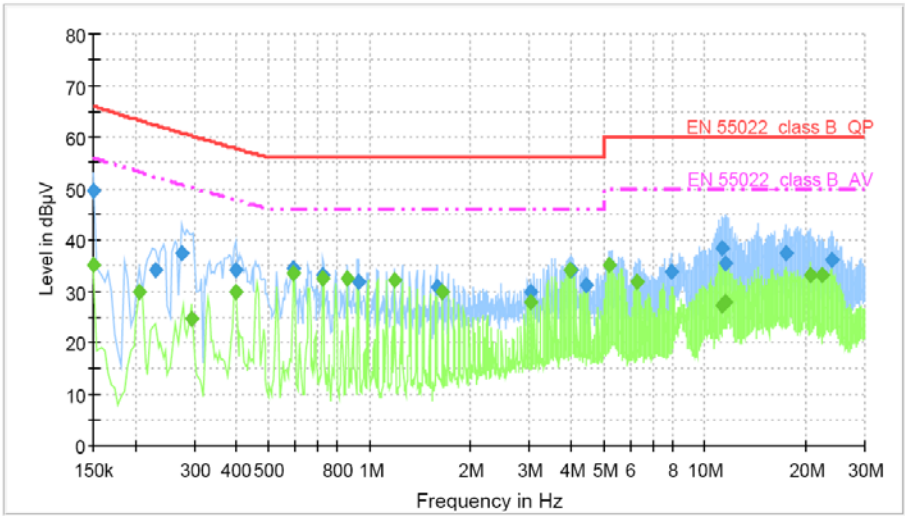
Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	48.6	1000.000	9.000	GND	L1	9.9	17.4	66.0	
0.206000	33.2	1000.000	9.000	GND	L1	9.9	30.0	63.2	
0.294000	37.3	1000.000	9.000	GND	L1	10.0	22.9	60.2	
0.394000	34.0	1000.000	9.000	GND	L1	10.0	23.9	57.9	
0.598000	31.3	1000.000	9.000	GND	L1	10.0	24.7	56.0	
0.726000	33.2	1000.000	9.000	GND	L1	10.0	22.8	56.0	
0.858000	32.6	1000.000	9.000	GND	L1	10.0	23.4	56.0	
1.190000	31.1	1000.000	9.000	GND	L1	10.0	24.9	56.0	
1.782000	28.8	1000.000	9.000	GND	L1	10.1	27.2	56.0	
3.034000	29.5	1000.000	9.000	GND	L1	10.1	26.5	56.0	
3.962000	32.8	1000.000	9.000	GND	L1	10.2	23.2	56.0	
5.214000	34.4	1000.000	9.000	GND	L1	10.2	25.6	60.0	
7.926000	33.7	1000.000	9.000	GND	L1	10.3	26.3	60.0	
11.158000	36.0	1000.000	9.000	GND	L1	10.3	24.0	60.0	
11.638000	36.5	1000.000	9.000	GND	L1	10.4	23.5	60.0	
19.978000	35.3	1000.000	9.000	GND	L1	10.8	24.7	60.0	
23.306000	33.8	1000.000	9.000	GND	L1	11.0	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
0.150000	33.4	1000.000	9.000	GND	L1	9.9	22.6	56.0	
0.206000	30.8	1000.000	9.000	GND	L1	9.9	22.4	53.2	
0.278000	27.7	1000.000	9.000	GND	L1	10.0	22.9	50.6	
0.398000	29.8	1000.000	9.000	GND	L1	10.0	17.9	47.7	
0.530000	31.1	1000.000	9.000	GND	L1	10.0	14.9	46.0	
0.794000	32.8	1000.000	9.000	GND	L1	10.0	13.2	46.0	
0.858000	33.0	1000.000	9.000	GND	L1	10.0	13.0	46.0	
1.254000	32.1	1000.000	9.000	GND	L1	10.0	13.9	46.0	
1.782000	29.1	1000.000	9.000	GND	L1	10.1	16.9	46.0	
3.034000	28.4	1000.000	9.000	GND	L1	10.1	17.6	46.0	
3.962000	33.4	1000.000	9.000	GND	L1	10.2	12.6	46.0	
5.214000	34.7	1000.000	9.000	GND	L1	10.2	15.3	50.0	
7.990000	33.0	1000.000	9.000	GND	L1	10.3	17.0	50.0	
11.298000	29.6	1000.000	9.000	GND	L1	10.3	20.4	50.0	
14.122000	32.5	1000.000	9.000	GND	L1	10.6	17.5	50.0	
17.430000	33.5	1000.000	9.000	GND	L1	10.7	16.5	50.0	
23.774000	28.9	1000.000	9.000	GND	L1	11.0	21.1	50.0	

Voltage with 4-Line-LISN_N



Final Measurement Detector 1

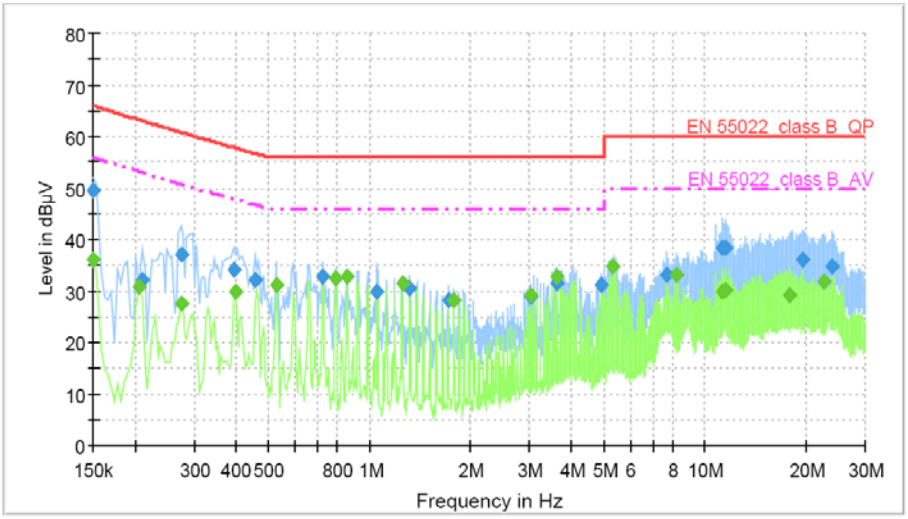
Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	49.6	1000.000	9.000	GND	N	9.9	16.4	66.0	
0.230000	34.0	1000.000	9.000	GND	N	10.0	28.3	62.3	
0.274000	37.4	1000.000	9.000	GND	N	10.0	23.4	60.8	
0.398000	34.1	1000.000	9.000	GND	N	10.0	23.7	57.8	
0.594000	34.3	1000.000	9.000	GND	N	10.0	21.7	56.0	
0.726000	33.0	1000.000	9.000	GND	N	10.0	23.0	56.0	
0.926000	31.8	1000.000	9.000	GND	N	10.0	24.2	56.0	
1.586000	30.9	1000.000	9.000	GND	N	10.1	25.1	56.0	
1.654000	29.9	1000.000	9.000	GND	N	10.1	26.1	56.0	
3.034000	29.7	1000.000	9.000	GND	N	10.1	26.3	56.0	
4.026000	34.0	1000.000	9.000	GND	N	10.2	22.0	56.0	
4.426000	31.2	1000.000	9.000	GND	N	10.2	24.8	56.0	
7.922000	33.7	1000.000	9.000	GND	N	10.3	26.3	60.0	
11.306000	38.3	1000.000	9.000	GND	N	10.3	21.7	60.0	
11.494000	35.5	1000.000	9.000	GND	N	10.3	24.5	60.0	
17.562000	37.2	1000.000	9.000	GND	N	10.6	22.8	60.0	
24.038000	36.0	1000.000	9.000	GND	N	10.8	24.0	60.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	34.9	1000.000	9.000	GND	N	9.9	21.1	56.0	
0.206000	29.8	1000.000	9.000	GND	N	9.9	23.4	53.2	
0.294000	24.5	1000.000	9.000	GND	N	10.0	25.7	50.2	
0.398000	29.8	1000.000	9.000	GND	N	10.0	17.9	47.7	
0.594000	33.6	1000.000	9.000	GND	N	10.0	12.4	46.0	
0.726000	32.5	1000.000	9.000	GND	N	10.0	13.5	46.0	
0.858000	32.5	1000.000	9.000	GND	N	10.0	13.5	46.0	
1.190000	32.0	1000.000	9.000	GND	N	10.0	14.0	46.0	
1.650000	29.9	1000.000	9.000	GND	N	10.1	16.1	46.0	
3.038000	27.9	1000.000	9.000	GND	N	10.1	18.1	46.0	
3.962000	34.2	1000.000	9.000	GND	N	10.2	11.8	46.0	
5.214000	35.2	1000.000	9.000	GND	N	10.2	14.8	50.0	
6.270000	31.9	1000.000	9.000	GND	N	10.2	18.1	50.0	
11.214000	27.2	1000.000	9.000	GND	N	10.3	22.8	50.0	
11.494000	27.8	1000.000	9.000	GND	N	10.3	22.2	50.0	
20.730000	33.3	1000.000	9.000	GND	N	10.8	16.7	50.0	
22.318000	33.0	1000.000	9.000	GND	N	10.8	17.0	50.0	

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

Voltage with 4-Line-LISN_L1



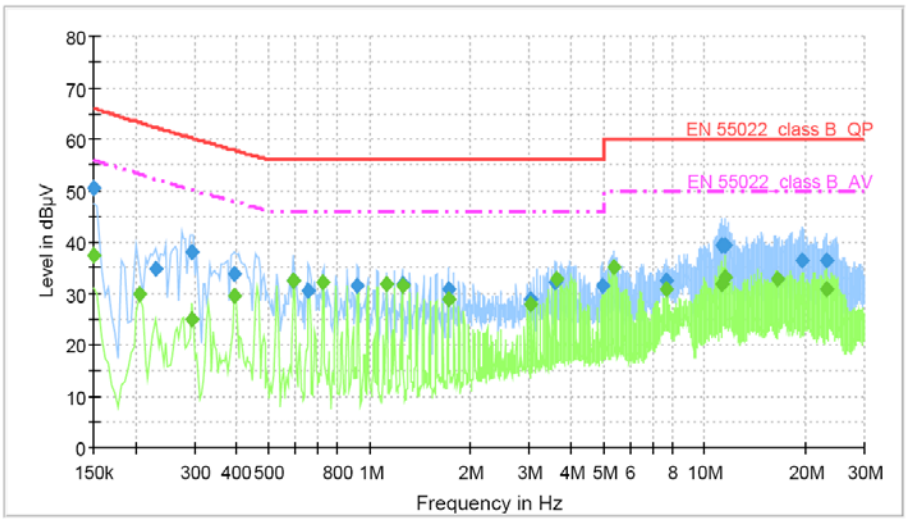
Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	49.6	1000.000	9.000	GND	L1	9.9	16.4	66.0	
0.210000	32.2	1000.000	9.000	GND	L1	9.9	30.8	63.0	
0.274000	37.2	1000.000	9.000	GND	L1	10.0	23.6	60.8	
0.394000	34.0	1000.000	9.000	GND	L1	10.0	23.9	57.9	
0.458000	32.3	1000.000	9.000	GND	L1	10.0	24.4	56.7	
0.726000	32.6	1000.000	9.000	GND	L1	10.0	23.4	56.0	
1.054000	30.0	1000.000	9.000	GND	L1	10.0	26.0	56.0	
1.322000	30.6	1000.000	9.000	GND	L1	10.0	25.4	56.0	
1.718000	28.1	1000.000	9.000	GND	L1	10.1	27.9	56.0	
3.034000	29.0	1000.000	9.000	GND	L1	10.1	27.0	56.0	
3.634000	31.5	1000.000	9.000	GND	L1	10.1	24.5	56.0	
4.886000	31.0	1000.000	9.000	GND	L1	10.2	25.0	56.0	
7.658000	33.2	1000.000	9.000	GND	L1	10.3	26.8	60.0	
11.294000	38.2	1000.000	9.000	GND	L1	10.3	21.8	60.0	
11.566000	38.4	1000.000	9.000	GND	L1	10.4	21.6	60.0	
19.478000	36.0	1000.000	9.000	GND	L1	10.8	24.0	60.0	
24.022000	34.6	1000.000	9.000	GND	L1	11.0	25.4	60.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	36.0	1000.000	9.000	GND	L1	9.9	20.0	56.0	
0.206000	30.8	1000.000	9.000	GND	L1	9.9	22.4	53.2	
0.274000	27.6	1000.000	9.000	GND	L1	10.0	23.2	50.8	
0.398000	29.8	1000.000	9.000	GND	L1	10.0	17.9	47.7	
0.526000	31.0	1000.000	9.000	GND	L1	10.0	15.0	46.0	
0.790000	32.3	1000.000	9.000	GND	L1	10.0	13.7	46.0	
0.858000	32.6	1000.000	9.000	GND	L1	10.0	13.4	46.0	
1.254000	31.5	1000.000	9.000	GND	L1	10.0	14.5	46.0	
1.782000	28.2	1000.000	9.000	GND	L1	10.1	17.8	46.0	
3.038000	29.3	1000.000	9.000	GND	L1	10.1	16.7	46.0	
3.630000	32.9	1000.000	9.000	GND	L1	10.1	13.1	46.0	
5.282000	34.7	1000.000	9.000	GND	L1	10.2	15.3	50.0	
8.186000	33.2	1000.000	9.000	GND	L1	10.3	16.8	50.0	
11.286000	29.7	1000.000	9.000	GND	L1	10.3	20.3	50.0	
11.494000	30.3	1000.000	9.000	GND	L1	10.4	19.7	50.0	
17.822000	29.2	1000.000	9.000	GND	L1	10.7	20.8	50.0	
22.646000	31.8	1000.000	9.000	GND	L1	10.9	18.2	50.0	

Voltage with 4-Line-LISN_N



Final Measurement Detector 1

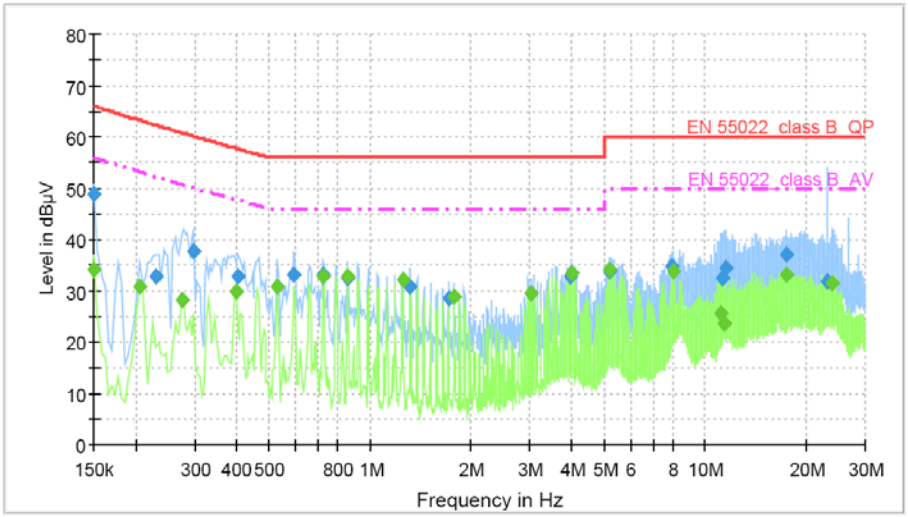
Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	50.5	1000.000	9.000	GND	N	9.9	15.5	66.0	
0.230000	34.6	1000.000	9.000	GND	N	10.0	27.7	62.3	
0.294000	38.1	1000.000	9.000	GND	N	10.0	22.1	60.2	
0.394000	33.7	1000.000	9.000	GND	N	10.0	24.2	57.9	
0.590000	32.4	1000.000	9.000	GND	N	10.0	23.6	56.0	
0.658000	30.6	1000.000	9.000	GND	N	10.0	25.4	56.0	
0.922000	31.4	1000.000	9.000	GND	N	10.0	24.6	56.0	
1.254000	31.9	1000.000	9.000	GND	N	10.0	24.1	56.0	
1.718000	30.8	1000.000	9.000	GND	N	10.1	25.2	56.0	
3.034000	28.9	1000.000	9.000	GND	N	10.1	27.1	56.0	
3.562000	32.1	1000.000	9.000	GND	N	10.1	23.9	56.0	
4.950000	31.5	1000.000	9.000	GND	N	10.2	24.5	56.0	
7.722000	32.6	1000.000	9.000	GND	N	10.3	27.4	60.0	
11.298000	39.3	1000.000	9.000	GND	N	10.3	20.7	60.0	
11.554000	39.3	1000.000	9.000	GND	N	10.3	20.7	60.0	
19.670000	36.3	1000.000	9.000	GND	N	10.7	23.7	60.0	
23.042000	36.4	1000.000	9.000	GND	N	10.8	23.6	60.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	37.3	1000.000	9.000	GND	N	9.9	18.7	56.0	
0.206000	29.8	1000.000	9.000	GND	N	9.9	23.4	53.2	
0.294000	25.0	1000.000	9.000	GND	N	10.0	25.2	50.2	
0.394000	29.4	1000.000	9.000	GND	N	10.0	18.4	47.8	
0.594000	32.6	1000.000	9.000	GND	N	10.0	13.4	46.0	
0.726000	32.1	1000.000	9.000	GND	N	10.0	13.9	46.0	
1.122000	31.7	1000.000	9.000	GND	N	10.0	14.3	46.0	
1.254000	31.3	1000.000	9.000	GND	N	10.0	14.7	46.0	
1.718000	29.0	1000.000	9.000	GND	N	10.1	17.0	46.0	
3.038000	28.0	1000.000	9.000	GND	N	10.1	18.0	46.0	
3.630000	32.9	1000.000	9.000	GND	N	10.1	13.1	46.0	
5.346000	35.0	1000.000	9.000	GND	N	10.2	15.0	50.0	
7.658000	30.8	1000.000	9.000	GND	N	10.3	19.2	50.0	
11.214000	31.7	1000.000	9.000	GND	N	10.3	18.3	50.0	
11.554000	33.2	1000.000	9.000	GND	N	10.3	16.8	50.0	
16.438000	32.7	1000.000	9.000	GND	N	10.6	17.3	50.0	
23.042000	30.9	1000.000	9.000	GND	N	10.8	19.1	50.0	

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

Voltage with 4-Line-LISN_L1



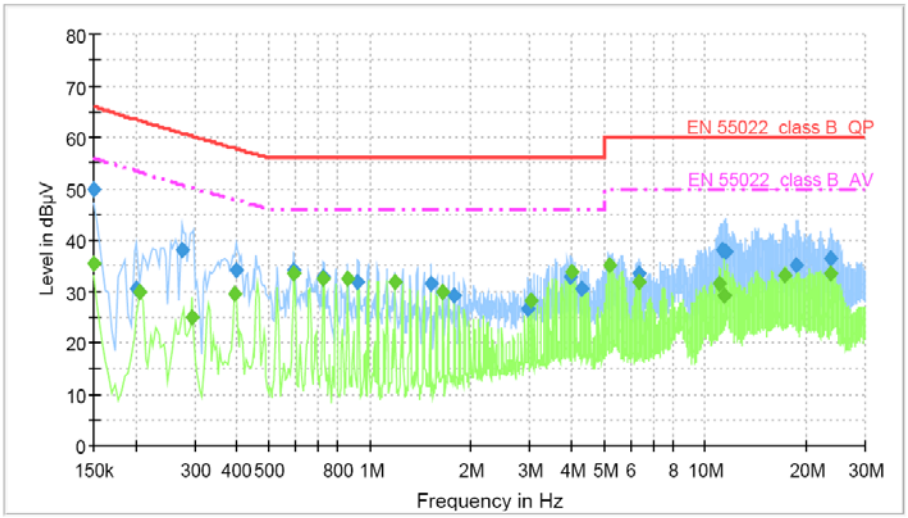
Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	48.8	1000.000	9.000	GND	L1	9.9	17.2	66.0	
0.230000	32.9	1000.000	9.000	GND	L1	9.9	29.4	62.3	
0.298000	37.6	1000.000	9.000	GND	L1	10.0	22.5	60.1	
0.402000	32.7	1000.000	9.000	GND	L1	10.0	25.0	57.7	
0.594000	33.0	1000.000	9.000	GND	L1	10.0	23.0	56.0	
0.726000	33.0	1000.000	9.000	GND	L1	10.0	23.0	56.0	
0.858000	32.4	1000.000	9.000	GND	L1	10.0	23.6	56.0	
1.322000	30.8	1000.000	9.000	GND	L1	10.0	25.2	56.0	
1.718000	28.5	1000.000	9.000	GND	L1	10.1	27.5	56.0	
3.034000	29.4	1000.000	9.000	GND	L1	10.1	26.6	56.0	
3.962000	32.8	1000.000	9.000	GND	L1	10.2	23.2	56.0	
5.214000	33.9	1000.000	9.000	GND	L1	10.2	26.1	60.0	
7.990000	34.9	1000.000	9.000	GND	L1	10.3	25.1	60.0	
11.286000	32.4	1000.000	9.000	GND	L1	10.3	27.6	60.0	
11.574000	34.6	1000.000	9.000	GND	L1	10.4	25.4	60.0	
17.430000	37.1	1000.000	9.000	GND	L1	10.7	22.9	60.0	
23.270000	31.7	1000.000	9.000	GND	L1	11.0	28.3	60.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	34.1	1000.000	9.000	GND	L1	9.9	21.9	56.0	
0.206000	31.0	1000.000	9.000	GND	L1	9.9	22.2	53.2	
0.274000	28.1	1000.000	9.000	GND	L1	10.0	22.7	50.8	
0.398000	29.8	1000.000	9.000	GND	L1	10.0	17.9	47.7	
0.526000	30.8	1000.000	9.000	GND	L1	10.0	15.2	46.0	
0.726000	32.8	1000.000	9.000	GND	L1	10.0	13.2	46.0	
0.858000	32.9	1000.000	9.000	GND	L1	10.0	13.1	46.0	
1.254000	32.0	1000.000	9.000	GND	L1	10.0	14.0	46.0	
1.782000	28.9	1000.000	9.000	GND	L1	10.1	17.1	46.0	
3.038000	29.6	1000.000	9.000	GND	L1	10.1	16.4	46.0	
4.026000	33.4	1000.000	9.000	GND	L1	10.2	12.6	46.0	
5.214000	34.0	1000.000	9.000	GND	L1	10.2	16.0	50.0	
8.054000	33.7	1000.000	9.000	GND	L1	10.3	16.3	50.0	
11.102000	25.6	1000.000	9.000	GND	L1	10.3	24.4	50.0	
11.402000	23.8	1000.000	9.000	GND	L1	10.3	26.2	50.0	
17.566000	33.0	1000.000	9.000	GND	L1	10.7	17.0	50.0	
23.970000	31.3	1000.000	9.000	GND	L1	11.0	18.7	50.0	

Voltage with 4-Line-LISN_N



Final Measurement Detector 1

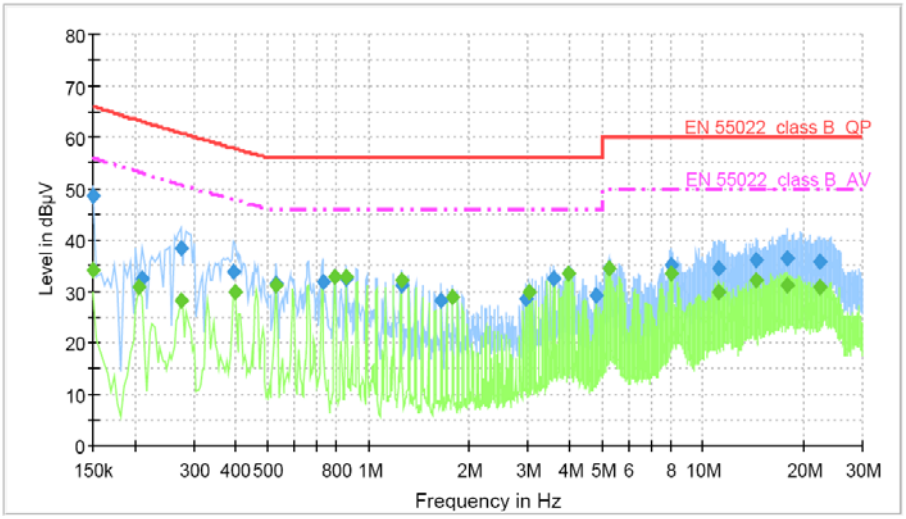
Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	49.8	1000.000	9.000	GND	N	9.9	16.2	66.0	
0.202000	30.5	1000.000	9.000	GND	N	9.9	32.9	63.4	
0.274000	38.1	1000.000	9.000	GND	N	10.0	22.7	60.8	
0.398000	34.1	1000.000	9.000	GND	N	10.0	23.7	57.8	
0.594000	34.2	1000.000	9.000	GND	N	10.0	21.8	56.0	
0.726000	32.7	1000.000	9.000	GND	N	10.0	23.3	56.0	
0.922000	31.7	1000.000	9.000	GND	N	10.0	24.3	56.0	
1.518000	31.3	1000.000	9.000	GND	N	10.1	24.7	56.0	
1.786000	29.0	1000.000	9.000	GND	N	10.1	27.0	56.0	
2.966000	26.5	1000.000	9.000	GND	N	10.1	29.5	56.0	
3.958000	32.9	1000.000	9.000	GND	N	10.2	23.1	56.0	
4.294000	30.5	1000.000	9.000	GND	N	10.2	25.5	56.0	
6.338000	33.5	1000.000	9.000	GND	N	10.2	26.5	60.0	
11.226000	38.1	1000.000	9.000	GND	N	10.3	21.9	60.0	
11.574000	37.7	1000.000	9.000	GND	N	10.3	22.3	60.0	
18.746000	35.1	1000.000	9.000	GND	N	10.7	24.9	60.0	
23.766000	36.2	1000.000	9.000	GND	N	10.8	23.8	60.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	35.3	1000.000	9.000	GND	N	9.9	20.7	56.0	
0.206000	29.8	1000.000	9.000	GND	N	9.9	23.4	53.2	
0.294000	24.9	1000.000	9.000	GND	N	10.0	25.3	50.2	
0.394000	29.6	1000.000	9.000	GND	N	10.0	18.2	47.8	
0.594000	33.5	1000.000	9.000	GND	N	10.0	12.5	46.0	
0.726000	32.5	1000.000	9.000	GND	N	10.0	13.5	46.0	
0.858000	32.4	1000.000	9.000	GND	N	10.0	13.6	46.0	
1.190000	31.7	1000.000	9.000	GND	N	10.0	14.3	46.0	
1.650000	29.7	1000.000	9.000	GND	N	10.1	16.3	46.0	
3.038000	28.0	1000.000	9.000	GND	N	10.1	18.0	46.0	
4.026000	33.9	1000.000	9.000	GND	N	10.2	12.1	46.0	
5.214000	35.1	1000.000	9.000	GND	N	10.2	14.9	50.0	
6.338000	31.8	1000.000	9.000	GND	N	10.2	18.2	50.0	
11.026000	31.6	1000.000	9.000	GND	N	10.3	18.4	50.0	
11.418000	29.3	1000.000	9.000	GND	N	10.3	20.7	50.0	
17.362000	33.0	1000.000	9.000	GND	N	10.6	17.0	50.0	
23.634000	33.6	1000.000	9.000	GND	N	10.8	16.4	50.0	

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

Voltage with 4-Line-LISN_L1



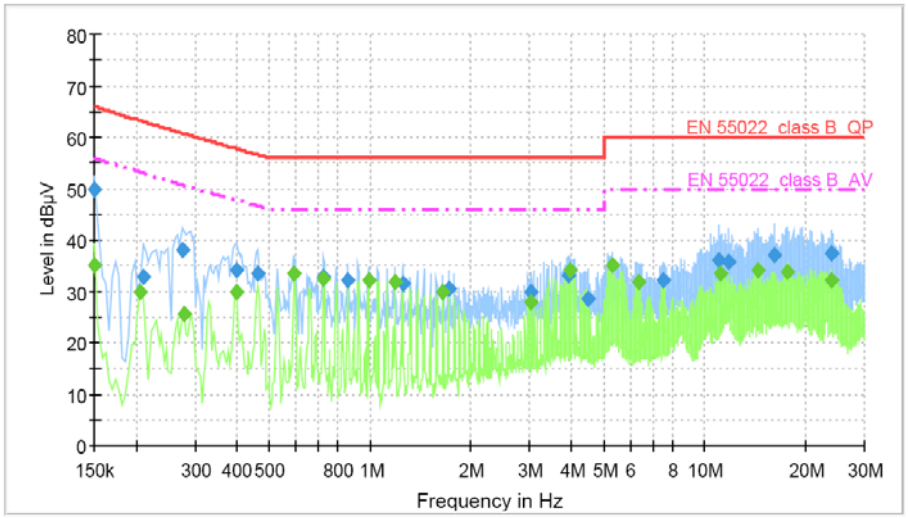
Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	48.7	1000.000	9.000	GND	L1	9.9	17.3	66.0	
0.210000	32.6	1000.000	9.000	GND	L1	9.9	30.4	63.0	
0.274000	38.3	1000.000	9.000	GND	L1	10.0	22.5	60.8	
0.394000	33.8	1000.000	9.000	GND	L1	10.0	24.1	57.9	
0.530000	31.5	1000.000	9.000	GND	L1	10.0	24.5	56.0	
0.730000	31.8	1000.000	9.000	GND	L1	10.0	24.2	56.0	
0.858000	32.5	1000.000	9.000	GND	L1	10.0	23.5	56.0	
1.254000	31.2	1000.000	9.000	GND	L1	10.0	24.8	56.0	
1.650000	28.1	1000.000	9.000	GND	L1	10.1	27.9	56.0	
2.970000	28.5	1000.000	9.000	GND	L1	10.1	27.5	56.0	
3.566000	32.5	1000.000	9.000	GND	L1	10.1	23.5	56.0	
4.822000	29.1	1000.000	9.000	GND	L1	10.2	26.9	56.0	
8.058000	35.1	1000.000	9.000	GND	L1	10.3	24.9	60.0	
11.086000	34.5	1000.000	9.000	GND	L1	10.3	25.5	60.0	
14.390000	36.0	1000.000	9.000	GND	L1	10.6	24.0	60.0	
17.834000	36.5	1000.000	9.000	GND	L1	10.7	23.5	60.0	
22.382000	35.6	1000.000	9.000	GND	L1	10.9	24.4	60.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	33.9	1000.000	9.000	GND	L1	9.9	22.1	56.0	
0.206000	31.0	1000.000	9.000	GND	L1	9.9	22.2	53.2	
0.274000	28.2	1000.000	9.000	GND	L1	10.0	22.6	50.8	
0.398000	29.8	1000.000	9.000	GND	L1	10.0	17.9	47.7	
0.530000	31.1	1000.000	9.000	GND	L1	10.0	14.9	46.0	
0.794000	32.7	1000.000	9.000	GND	L1	10.0	13.3	46.0	
0.858000	32.9	1000.000	9.000	GND	L1	10.0	13.1	46.0	
1.254000	32.0	1000.000	9.000	GND	L1	10.0	14.0	46.0	
1.782000	28.9	1000.000	9.000	GND	L1	10.1	17.1	46.0	
3.038000	29.7	1000.000	9.000	GND	L1	10.1	16.3	46.0	
3.962000	33.3	1000.000	9.000	GND	L1	10.2	12.7	46.0	
5.218000	34.4	1000.000	9.000	GND	L1	10.2	15.6	50.0	
8.058000	33.5	1000.000	9.000	GND	L1	10.3	16.5	50.0	
11.086000	29.8	1000.000	9.000	GND	L1	10.3	20.2	50.0	
14.462000	32.1	1000.000	9.000	GND	L1	10.6	17.9	50.0	
17.838000	31.0	1000.000	9.000	GND	L1	10.7	19.0	50.0	
22.450000	30.7	1000.000	9.000	GND	L1	10.9	19.3	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
0.150000	49.7	1000.000	9.000	GND	N	9.9	16.3	66.0	
0.210000	32.7	1000.000	9.000	GND	N	9.9	30.3	63.0	
0.274000	38.1	1000.000	9.000	GND	N	10.0	22.7	60.8	
0.398000	34.1	1000.000	9.000	GND	N	10.0	23.7	57.8	
0.462000	33.6	1000.000	9.000	GND	N	10.0	23.0	56.6	
0.726000	32.8	1000.000	9.000	GND	N	10.0	23.2	56.0	
0.858000	32.1	1000.000	9.000	GND	N	10.0	23.9	56.0	
1.254000	31.5	1000.000	9.000	GND	N	10.0	24.5	56.0	
1.718000	30.4	1000.000	9.000	GND	N	10.1	25.6	56.0	
3.038000	29.7	1000.000	9.000	GND	N	10.1	26.3	56.0	
3.898000	33.3	1000.000	9.000	GND	N	10.2	22.7	56.0	
4.494000	28.6	1000.000	9.000	GND	N	10.2	27.4	56.0	
7.526000	32.1	1000.000	9.000	GND	N	10.3	27.9	60.0	
11.022000	36.0	1000.000	9.000	GND	N	10.3	24.0	60.0	
11.850000	35.6	1000.000	9.000	GND	N	10.4	24.4	60.0	
16.118000	36.9	1000.000	9.000	GND	N	10.6	23.1	60.0	
23.974000	37.4	1000.000	9.000	GND	N	10.8	22.6	60.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	35.2	1000.000	9.000	GND	N	9.9	20.8	56.0	
0.206000	29.8	1000.000	9.000	GND	N	9.9	23.4	53.2	
0.278000	25.4	1000.000	9.000	GND	N	10.0	25.2	50.6	
0.398000	29.8	1000.000	9.000	GND	N	10.0	17.9	47.7	
0.594000	33.5	1000.000	9.000	GND	N	10.0	12.5	46.0	
0.726000	32.5	1000.000	9.000	GND	N	10.0	13.5	46.0	
0.990000	32.2	1000.000	9.000	GND	N	10.0	13.8	46.0	
1.190000	31.9	1000.000	9.000	GND	N	10.0	14.1	46.0	
1.650000	29.7	1000.000	9.000	GND	N	10.1	16.3	46.0	
3.038000	28.0	1000.000	9.000	GND	N	10.1	18.0	46.0	
3.962000	34.2	1000.000	9.000	GND	N	10.2	11.8	46.0	
5.282000	35.0	1000.000	9.000	GND	N	10.2	15.0	50.0	
6.338000	31.7	1000.000	9.000	GND	N	10.2	18.3	50.0	
11.158000	33.4	1000.000	9.000	GND	N	10.3	16.6	50.0	
14.394000	34.1	1000.000	9.000	GND	N	10.5	15.9	50.0	
17.702000	33.9	1000.000	9.000	GND	N	10.6	16.1	50.0	
24.038000	32.2	1000.000	9.000	GND	N	10.8	17.8	50.0	

6. Radiated Emission

6.1 Operating Environment

Temperature : 22 ℃
Relative Humidity : 40 % 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 μV/m	CISPR Limit @ 10 m. dB μV/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

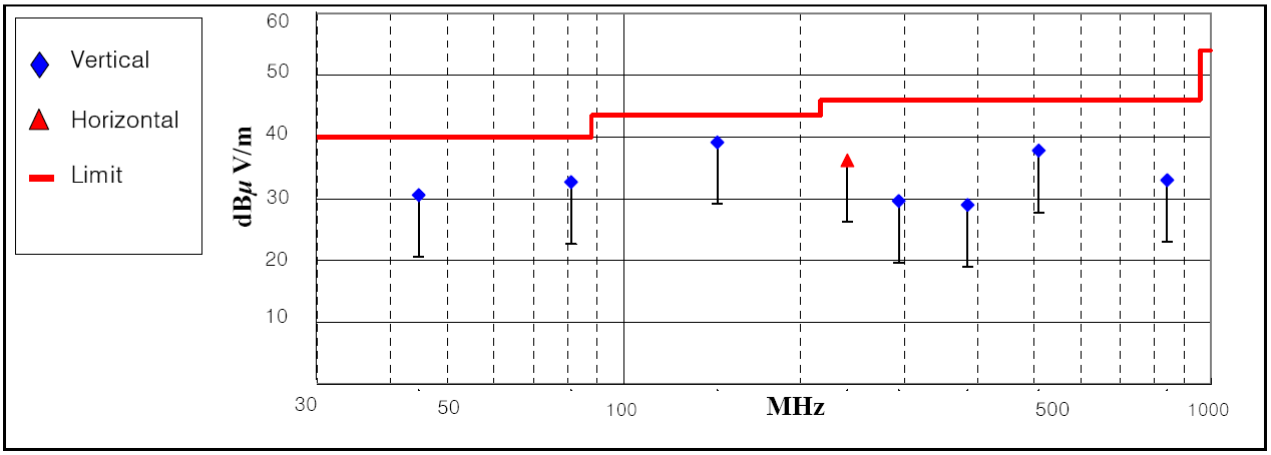
	Model Name	Manufacturer	Description	Serial Number	Due to Calibration
■ -	ESI	Rohde & Schwarz	EMI test receiver	830482/010	12. 14. 2009
■ -	VULB9160	Schwarzbeck	Broaband test antenna	3193	12. 11. 2009
■ -	BBHA9120D	Schwarzbeck	Horn ANT	207	12. 26. 2009
■ -	MCU066	maturo GmbH	Position Controller	100/692/01	N/A
■ -	AM4.0	maturo GmbH	Turntable	415/657/01	N/A
■ -	TT2.5SI	maturo GmbH	Antenna Mast	240/565/01	N/A
■ -	AFS 44 00101800-25-10P-44	MITEQ	Preamplifier	1258943	11. 11. 2009

6.6 Test data for Radiated Emission

-. Test Date : May 9, 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

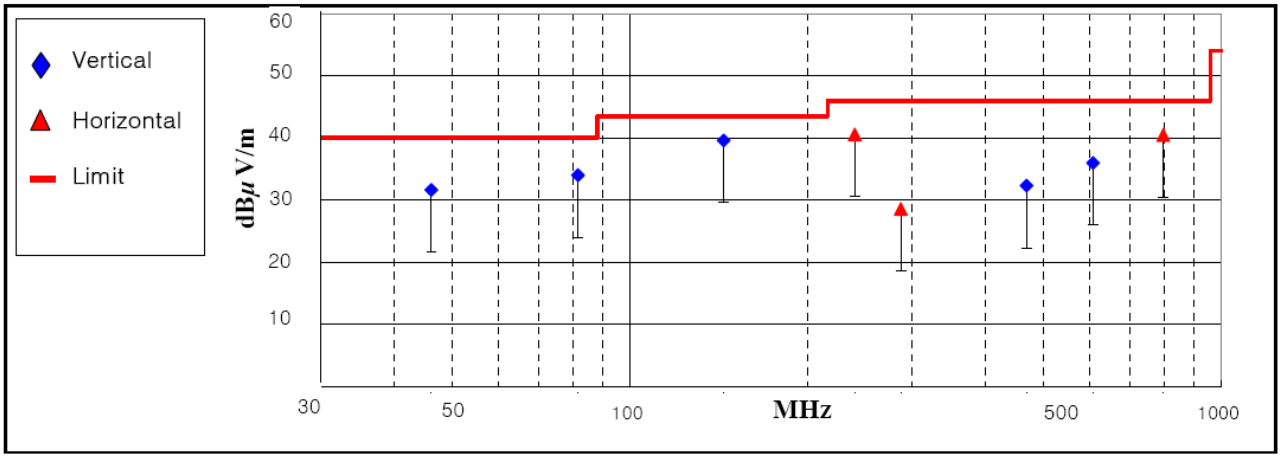
Frequency (MHz)	Measurement Level				Limit (dBμV/m)	Margin (dB)	Positioning System		
	Reading Value(dBμV)	Antenna Factor(dB/m)	Cable Loss(dB)	Test Result (dBμV/m)			Pol. (H/V)	Height (cm)	Angle (°)
44.64	17.33	12.00	1.28	30.61	40.00	9.39	V	105	250
81.18	23.11	7.81	1.77	32.69	40.00	7.31	V	103	340
144.00	24.52	12.64	1.97	39.13	43.50	4.37	V	116	305
239.99	22.70	10.81	2.69	36.20	46.00	9.80	H	136	162
293.70	14.12	12.53	2.98	29.63	46.00	16.37	V	150	13
385.00	11.20	14.50	3.31	29.01	46.00	16.99	V	116	179
508.63	17.19	16.93	3.69	37.81	46.00	8.19	V	170	180
842.58	5.70	22.11	5.22	33.03	46.00	12.97	V	130	330



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

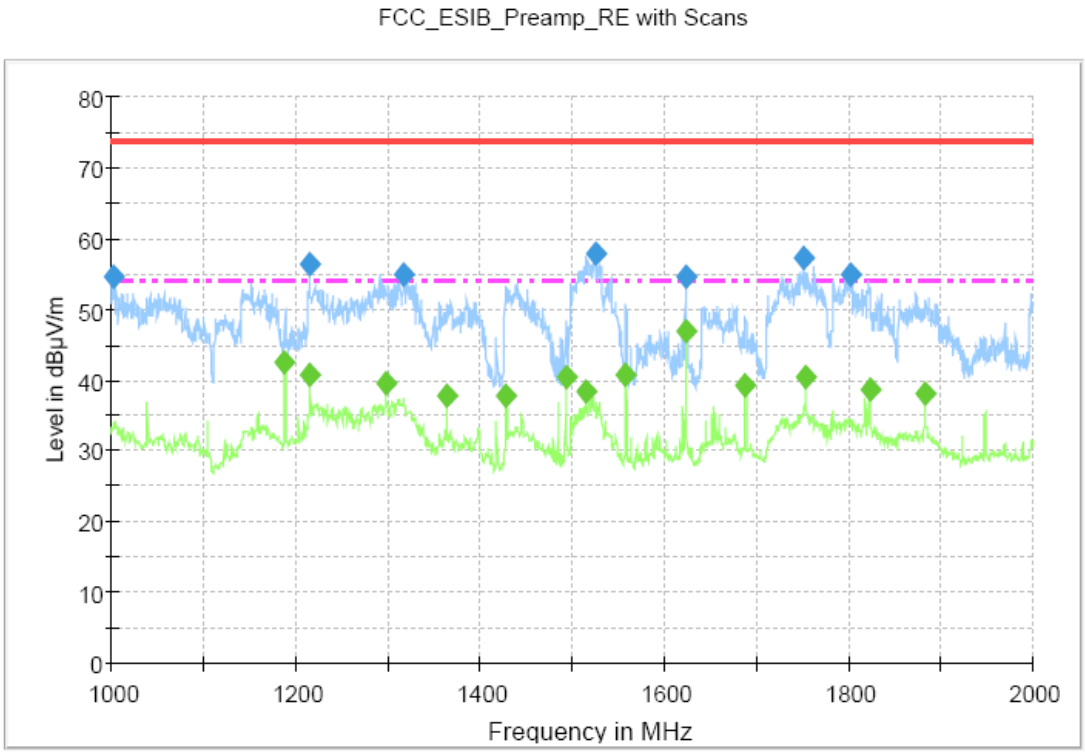
♦ Operating Condition: 1 024 * 768 / 60 Hz (HDMI/DVI: Digital mode)
Detector mode: Quasi- peak detector mode

Frequency (MHz)	Measurement Level				Limit (dBμV/m)	Margin (dB)	Positioning System		
	Reading Value(dBμV)	Antenna Factor(dB/m)	Cable Loss(dB)	Test Result (dBμV/m)			Pol. (H/V)	Height (cm)	Angle (°)
46.11	18.24	12.11	1.31	31.66	40.00	8.34	V	113	226
81.73	24.43	7.81	1.77	34.01	40.00	5.99	V	100	22
144.00	25.00	12.64	1.97	39.61	43.50	3.89	V	105	312
240.00	27.05	10.81	2.69	40.55	46.00	5.45	H	133	169
287.35	13.31	12.34	2.95	28.60	46.00	17.40	H	102	143
468.78	12.30	16.46	3.57	32.33	46.00	13.67	V	100	340
607.50	12.56	19.27	4.16	35.99	46.00	10.01	V	213	176
798.48	13.78	21.60	5.08	40.46	46.00	5.54	H	244	161



< 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



Final Result 1

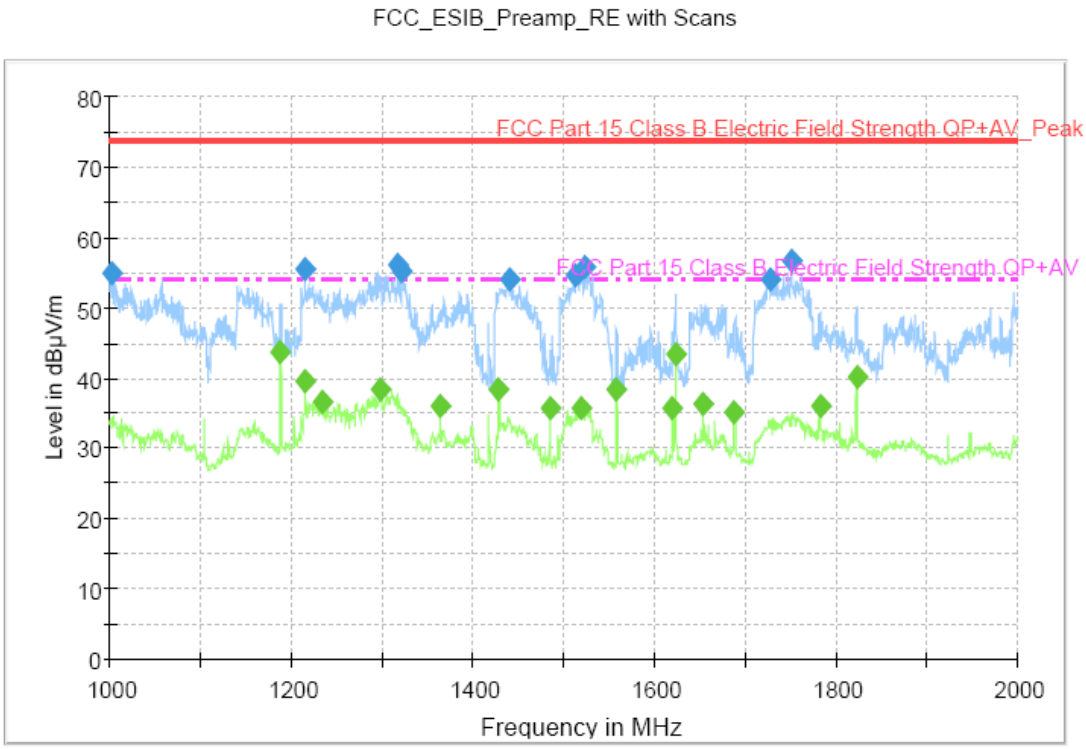
Frequency (MHz)	MaxPeak-MaxHold (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
1002.400000	54.6	200.0	V	180.0	-15.9	19.3	73.9	
1215.200000	56.3	100.0	V	180.0	-15.1	17.6	73.9	
1316.400000	55.0	100.0	V	180.0	-14.4	18.9	73.9	
1525.600000	57.8	200.0	V	180.0	-14.0	16.1	73.9	
1623.200000	54.7	200.0	V	180.0	-13.6	19.2	73.9	
1750.800000	57.2	100.0	V	180.0	-13.3	16.7	73.9	
1802.800000	55.0	100.0	V	180.0	-13.1	18.9	73.9	

Final Result 2

Frequency (MHz)	Average-MaxHold (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
1188.000000	42.6	200.0	V	0.0	-15.2	11.3	53.9	
1215.200000	40.9	100.0	V	180.0	-15.1	13.0	53.9	
1298.400000	39.6	300.0	H	90.0	-14.5	14.3	53.9	
1363.600000	37.9	200.0	H	90.0	-14.4	16.0	53.9	
1428.400000	37.7	100.0	V	180.0	-14.3	16.2	53.9	
1493.200000	40.5	100.0	V	180.0	-14.2	13.4	53.9	
1514.800000	38.4	100.0	V	180.0	-14.1	15.5	53.9	
1558.400000	40.6	100.0	V	180.0	-13.9	13.3	53.9	
1623.200000	46.8	200.0	V	180.0	-13.6	7.1	53.9	
1688.000000	39.3	200.0	H	180.0	-13.6	14.6	53.9	
1752.800000	40.4	100.0	V	180.0	-13.3	13.5	53.9	
1822.400000	38.6	100.0	V	180.0	-13.1	15.3	53.9	
1882.800000	38.2	100.0	V	180.0	-13.0	15.7	53.9	

< Fig 6. 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



Final Result 1

Frequency (MHz)	MaxPeak-MaxHold (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
1001.200000	54.8	200.0	V	180.0	-15.9	19.1	73.9	
1214.800000	55.6	100.0	V	180.0	-15.1	18.3	73.9	
1316.800000	56.1	100.0	V	180.0	-14.4	17.8	73.9	
1321.200000	55.3	100.0	V	180.0	-14.4	18.6	73.9	
1440.800000	54.1	100.0	V	180.0	-14.3	19.8	73.9	
1512.800000	54.7	200.0	V	180.0	-14.1	19.2	73.9	
1524.400000	55.9	200.0	V	180.0	-14.0	18.0	73.9	
1726.800000	54.0	100.0	V	180.0	-13.4	19.9	73.9	
1750.800000	56.7	100.0	V	180.0	-13.3	17.2	73.9	

Final Result 2

Frequency (MHz)	Average-MaxHold (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
1188.000000	43.8	200.0	V	90.0	-15.2	10.1	53.9	
1214.800000	39.7	100.0	V	180.0	-15.1	14.2	53.9	
1233.600000	36.6	100.0	V	180.0	-15.0	17.3	53.9	
1298.400000	38.2	100.0	V	180.0	-14.5	15.7	53.9	
1363.600000	35.9	100.0	V	180.0	-14.4	18.0	53.9	
1428.400000	38.3	100.0	V	180.0	-14.3	15.6	53.9	
1485.200000	35.7	100.0	V	0.0	-14.2	18.2	53.9	
1518.800000	35.7	200.0	V	180.0	-14.1	18.2	53.9	
1558.400000	38.5	200.0	V	180.0	-13.9	15.4	53.9	
1620.000000	35.8	200.0	V	180.0	-13.6	18.1	53.9	
1623.200000	43.4	100.0	V	180.0	-13.6	10.5	53.9	
1653.600000	36.4	100.0	V	0.0	-13.6	17.5	53.9	
1688.000000	35.1	100.0	V	180.0	-13.6	18.8	53.9	
1782.000000	35.9	200.0	V	0.0	-13.2	18.0	53.9	
1822.400000	40.1	200.0	V	180.0	-13.1	13.8	53.9	

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

7. Sample Calculations

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

7.1 Example 1 :

■ **20.3 MHz**

Class B Limit	**=**	**250 μV**	**= 48 dBμV**
Reading	**= - 67.8 dBm(Calibrated level)**		
Convert to dBμV	**= - 67.8 dBm + 107**	**=**	**39.2 dBμV**
$10^{(39.2dB\mu V/20)}$	**=**	**91.2 μV**	
Margin	**=**	**39.2 – 48**	**= -8.8**
	=	**8.8 dB below Limit**	

7.2 Example 2 :

■ **66.7 MHz**

Class B Limit	**=**	**100 μV/m**	**= 40.0 dBμV/m**
Reading	**= - 76.0 dBm(Calibrated level)**		
Convert to dBμV/m	**= - 67.8 dBm + 107**	**=**	**31.0 dBμV/m**
Antenna Factor + Cable Loss	**=**	**5.8 dB**	
	Total	**=**	**36.8 dBμV/m**
Margin	**=**	**36.8 – 40.0**	**= -3.2**
	=	**3.2 dB below Limit**	

8. Recommendation & Conclusion

The data collected shows that the **KIMIN ELECTRONIC CO., LTD. LCD TV/Monitor (Model Name: LT32U55H, HLD-320TB)** was complies with §15.107 and 15.109 of the FCC Rules.