



TEST REPORT



Report No. : KES-EM-23T1080

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KES Co., Ltd.3701, 40, Simin-daero 365beon-gil, Dongan-gu, Anyang-si,
Gyeonggi-do, 14057, Korea
Tel : +82-31-425-6200, Fax : +82-31-425-6200

1. Client

Applicant : Hanwha Vision Co., Ltd

Applicant Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do,
Republic of Korea

2. Sample Description

Product name : LED MONITOR

Model/Type No. : SMT-3215

Variant Model : -

Manufacturer : WEIHAI DAEWOO ELECTRONICS CO.,LTD

Manufacturer Address : NO.26 HONGKONG ROAD, ECONOMIC AND TECHNICAL
DEVELOPMENT ZONE, WEIHAI, SHANDONG, CHINA

3. Equipment authorization

 : Supplier's Declaration of Conformity

4. Date of Receipt

 : Nov. 16, 2023

5. Test date

 : Nov. 29, 2023 ~ Nov. 30, 2023

6. Date of Issue

 : Dec. 14, 2023

7. Test Results

 : In Compliance

Tested by

Zero

Young Jae, Kim
EMC Test Engineer

Reviewed by

이종일

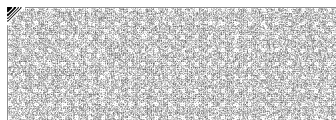
Dong Il, Lee
EMC Technical Manager

This test report is not related to KS Q ISO/IEC 17025 and KOLAS.

KES-QP16-F01(00-23-01-01)

KES Co., Ltd.

The authenticity of the test report, contact kes@kes.co.kr



REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Dec. 14, 2023	KES-EM-23T1080	Issued

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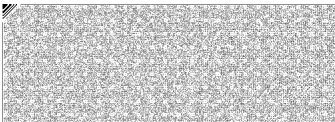
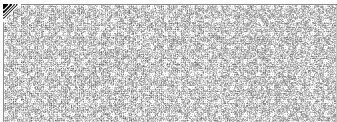
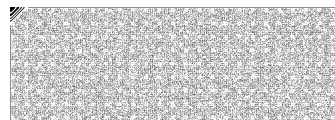


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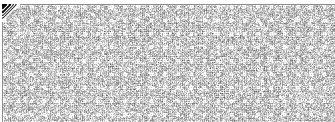
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	EUT Internal Photographs	오류! 책갈피가 정의되어 있지 않습니다.



1.0 General Product Description

Main Specifications of EUT are:

Model		31.5" SMT-3215	Remark
Display			
Screen Size		31.5"	
Max. Resolution		1920*1080 60Hz (FHD)	
Brightness		300 cd/m² (Typ)	
Contrast Ratio		3200:1 (Min) '4000:1 (Typ)	
Aspect Ratio		16:9	
Viewing Angle (H/V)		178°/178°	
Display Color		16.7M	
Response Time		20ms(Typ)	
Panel Life		30,000 hours	
Interface			
Video	Connector	VGA (1) HDMI 1.4(1), DP 1.2(1) Ain(1) Aout (1)	
	Connector	VGA	
VGA	Available Format	640 x 480@60Hz, 800 x 600@56Hz/60Hz/72Hz/75Hz, 1024 x 768@60Hz/70Hz/75Hz, 1280 x 1024@60Hz/75Hz, 1440 x 900@60Hz, 1680 x 1050@60Hz, 1920 x 1080@50Hz/60Hz, 1280 x 800@60Hz, 1280 x 960@60Hz, 1280 x 720@60Hz,	
HDMI	Connector	HDMI	
	Available Format	640 x 480@60Hz, 800 x 600@56Hz/60Hz/72Hz/75Hz, 1024 x 768@60Hz/70Hz/75Hz, 1280 x 1024@60Hz/75Hz, 1440 x 900@60Hz, 1680 x 1050@60Hz, 1920 x 1080@50Hz/60Hz, 720 x 480P60Hz, 1280 x 720P@50Hz, 720 x 576P@50Hz, 1920x1080P@50/60Hz, 1280 x 800@60Hz, 1280 x 960@60Hz, 1280 x 720@60Hz,	
DP	Connector	DP	
	Available Format	640 x 480@60Hz, 800 x 600@56Hz/60Hz/72Hz/75Hz, 1024 x 768@60Hz/70Hz/75Hz, 1280 x 1024@60Hz/75Hz, 1440 x 900@60Hz, 1680 x 1050@60Hz, 1920 x 1080@50Hz/60Hz, 720 x 480P60Hz, 1280 x 720P@50Hz, 720 x 576P@50Hz, 1920x1080P@50/60Hz, 1280 x 800@60Hz, 1280 x 960@60Hz, 1280 x 720@60Hz,	
Audio	Connector	Audio in/out	
	Output Signal	Loop-through line level(PC only), Speakers : 4Ω 2.5Wx 2	
PIP/PBP		NO	
Remocon		N/A	
On Screen Display (OSD)			
Functions		VESA™ DPM Compatible	
Language		Korean, English, Русский, Deutsch, Français, Español, Italiano, Português, Chinese (Simplified), Chinese (Traditional), Japanese, Arabic	
General			
Electrical	Input Voltage	AC 100-240V, 50/60HZ ,1.2A	
	Power Consumption	<60W	
Environmental	Operating Temperature	0 ~ +40°C (+32°F ~ +104°F)	
	Operating Humidity	10% ~ 80% (non-condensing)	
Mechanical	Dimensions with Stand	714.0*484.2*200.8mm	
	Dimensions without Stand	714.0*423.7*53.7mm	
	Bezel Size	3 Frameless Top:1.8mm Bottom:21mm Side : 1.8mm	
	Cabanet Color	Black	
	VESA Mounts Interface	100*100mm	
Weight	Monitor with Stand	7.272kg	
	Monitor without Stand	5.806kg	
	Box+foam+ accessory+With Stand monitor	1.206kg+0.658kg+0.304kg+7.272kg=9.44kg	accessory:power code+HDMI code+ Quick
	Box+foam+ accessory+without Stand monitor	1.206kg+0.658kg+0.304kg+5.806kg=7.974kg	
	Stand	including	



1.1 Test Voltage & Frequency

Unless indicated otherwise on the individual data sheet or test results, the test voltage and frequency was as indicated below.

☒ AC 120 V, 60 Hz

1.2 Variant Model Differences

Not applicable

1.3 Device Modifications

Not applicable

1.4 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
LED MONITOR	SMT-3215	-	Weihai Daewoo Electronics Co., Ltd.	EUT

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Desktop PC	-	-	-	-
Mouse	B138	-	ARESON TECHNOLOGY CPRO.	-
Earphone	-	-	-	-



1.6 External I/O Cabling

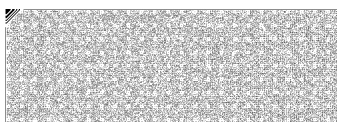
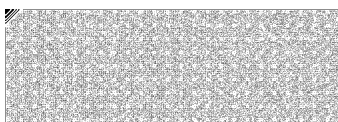
Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
LED MONITOR (EUT)	HDMI	Desktop PC	HDMI	1.5	S
	VGA	Desktop PC	VGA	1.5	S
	DisplayPort	Desktop PC	DisplayPort	1.5	S
	3.5 mm	Desktop PC	3.5 mm	1.5	U
	3.5 mm	Earphone	3.5 mm	1.0	U
Desktop PC	USB A TYPE	Mouse	USB A TYPE	1.5	U

* Unshielded=U, Shielded=S

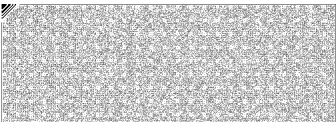
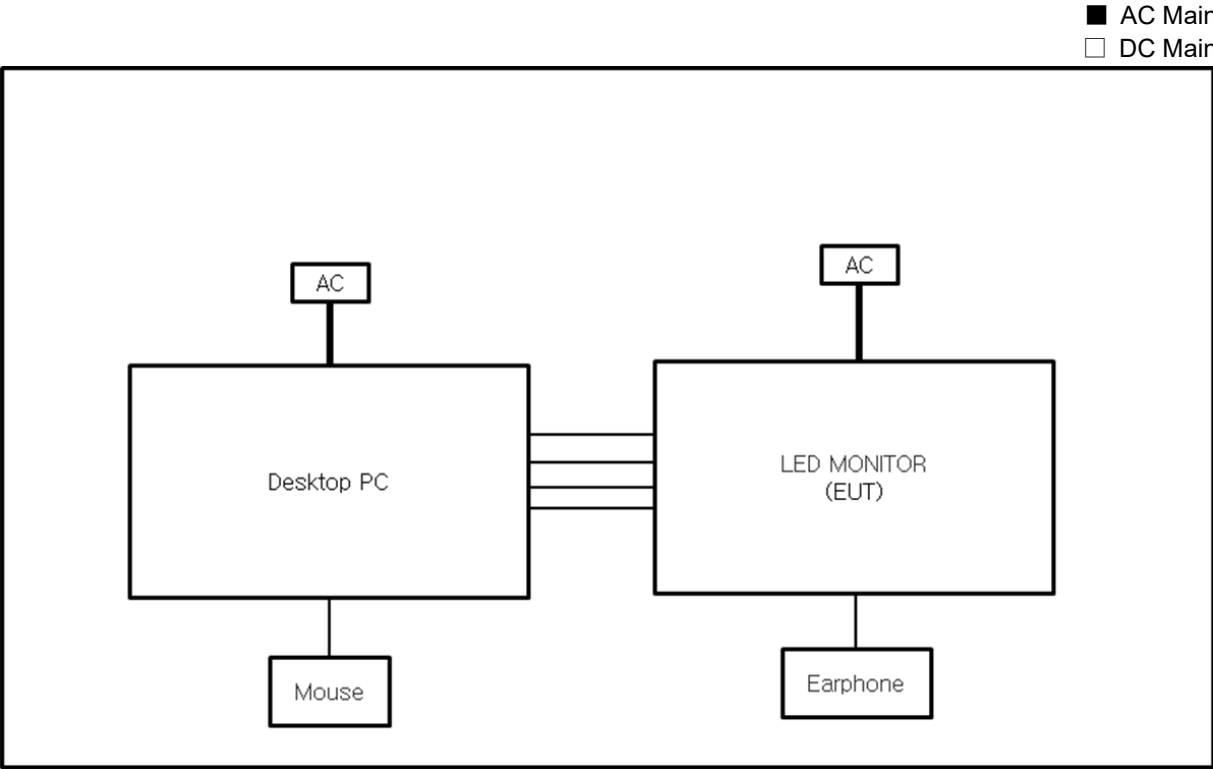
1.7 EUT Operating Mode(s)

Test mode	operating
Operation (HDMI MODE, VGA MODE, DisplayPort MODE)	The test was conducted by converting the input mode of the test equipment into VGA and HDMI and DisplayPort inputs and executing the moving color bar of the laptop to check whether it was normally output to the test equipment.

EUT Test operating S/W		
Name	Version	Manufacture Company
-	-	-



1.8 Configuration



1.9 Remarks when standards applied

N/A

1.10 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less.

1.11 Test Facility

The measurement facility is located at 473-21, Gayeo-ro, Yeosu-si, Gyeonggi-do, 12658, Korea, Republic of. The sites are constructed in conformance with the requirements of ANSI C63.4a-2017 and CISPR 16-1-4:2019

1.12 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
KOREA	RRA	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KR0100
International	KOLAS	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KT489
USA	FCC	3 m & 10 m Semi-Anechoic Chamber Conducted test site to perform FCC Part 15/18 measurements.	 KR0100
Canada	ISED	3 m & 10 m Semi-Anechoic Chamber and Conducted test site	 23298
JAPAN	VCCI	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site)	 C-20136, T-20137, R-20181, G-20176
Europe	TÜV SÜD	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 CARAT 001633 0004



2.0 Test Regulations

The emissions tests were performed according to following regulations:

- ☒ 47 CFR Part 15, Subpart A
- ☐ CISPR 22:2009 +A1:2010

☐ Class A

☐ Class B
- ☒ ANSI C63.4a-2017

☒ Class A

☐ Class B

☒ IC Regulation ICES-003 Issue 7

☐ CAN/CSA-CISPR 32:17

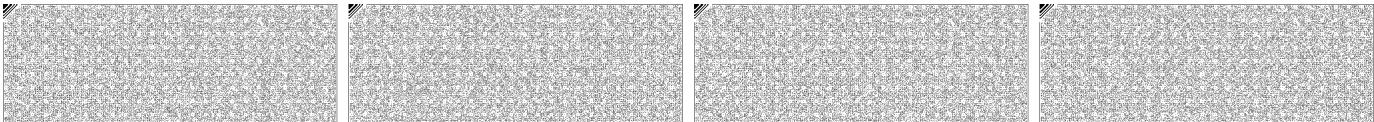
☐ Class A

☐ Class B

☒ ANSI C63.4a-2017

☒ Class A

☐ Class B



2.1 Conducted Emissions at Mains Power Ports

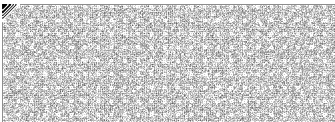
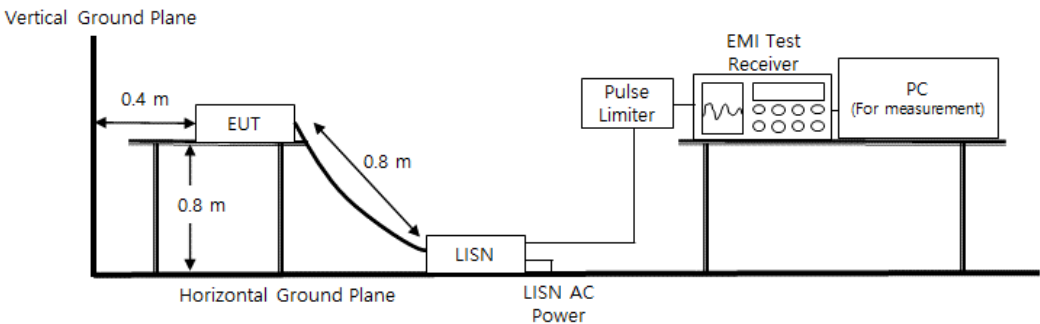
Test Date
Nov. 30, 2023

Test Location
Electro wave Shieldroom #6

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	EMC32	R & S	9.12.00	-
☒	EMI TEST RECEIVER	ESR3	R & S	101783	11, 08, 2024
☒	LISN	ENV216	R & S	101787	11, 08, 2024
☒	LISN	ESH2-Z5	R & S	100450	11, 08, 2024
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	11, 08, 2024

Diagram of test setup



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Test Conditions

Temperature: (21,8 ± 0,2) °C
Relative Humidity: (46,8 ± 0,4) % R.H.

Frequency Range of Measurement

150 kHz to 30 MHz

Instrument Settings

IF Band Width: 9 kHz

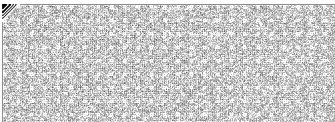
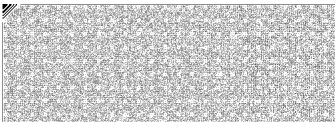
Test Results

The requirements are:

- ☒ PASS
- ☐ NOT PASS
- ☐ NOT APPLICABLE

Remarks

See Appendix A for test data.



2.2 Radiated Electric Field Emissions(Below 1 GHz)

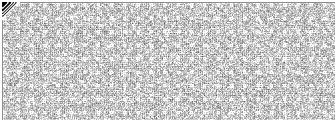
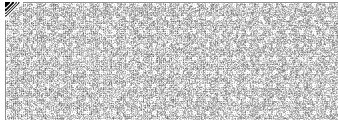
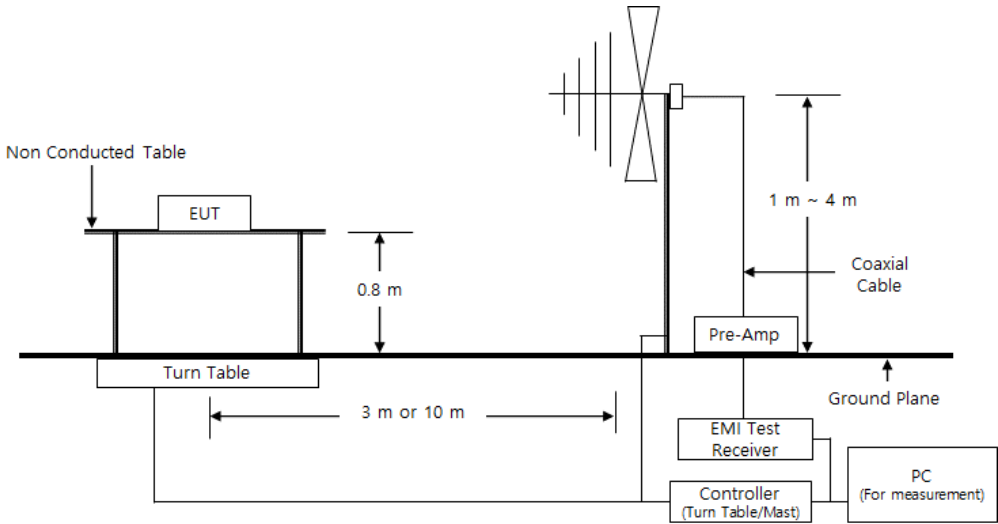
Test Date
Nov. 29, 2023

Test Location
☐ OPEN AREA TEST SITE #2 ☒ SEMI ANECHOIC CHAMBER #4(10m)

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.0	-
☒	EMI TEST RECEIVER	ESU26	R & S	100551	03, 21, 2024
☒	AMPLIFIER	SCU 01	R & S	100603	11, 08, 2024
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	11, 17, 2024
☒	ATTENUATOR	8491A	HP	32173	03, 03, 2024

Diagram of test setup



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Test Conditions

Temperature: (22,3 ± 0,2) °C
Relative Humidity: (46,1 ± 0,4) % R.H.

Frequency Range of Measurement

30 MHz to 1 GHz

Instrument Settings

IF Band Width: 120 kHz

Test Results

The requirements are:

- ☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks

- See Appendix A for test data.



2.3 Radiated Electric Field Emissions(Above 1 GHz)

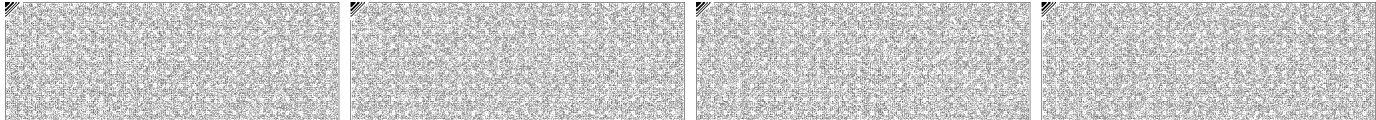
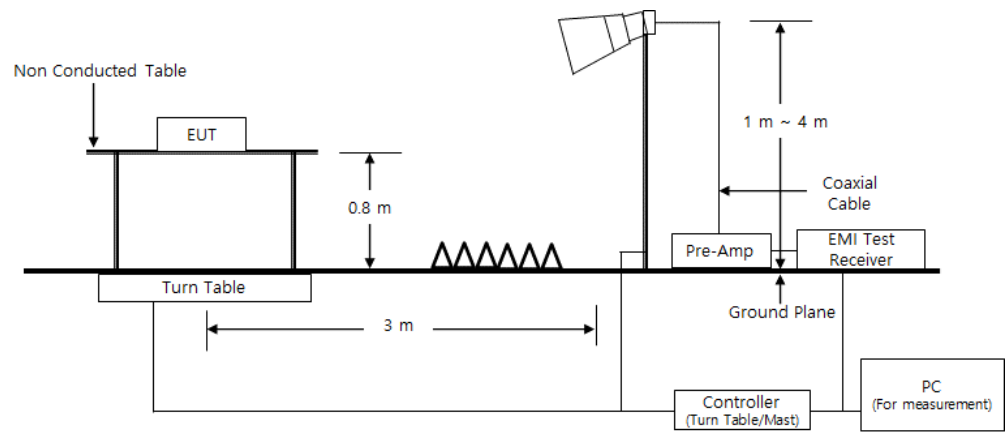
Test Date
Nov. 29, 2023

Test Location
SEMI ANECHOIC CHAMBER #5

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	ES10/RE	TOYO Corporation	2022.01.000	-
☒	EMI TEST RECEIVER	ESU26	Rohde & Schwarz	100552	03, 21, 2024
☒	HORN ANTENNA	BBHA 9120D	SCHWARZBECK	9120D-1802	11, 03, 2024
☒	PREAMPLIFIER	8449B	HP	3008A00538	05, 31, 2024
☒	ATTENUATOR	8491B	HP	23094	03, 21, 2024

Diagram of test setup



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Test Conditions

Temperature: (23,4 ± 0,2) °C
Relative Humidity: (45,2 ± 0,4) % R.H.

Frequency Range of Measurement

1 GHz to 6 GHz

Instrument Settings

IF Band Width: 1 MHz

Test Results

The requirements are:

- ☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

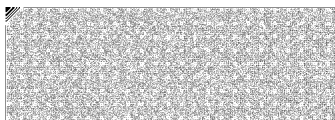
Remarks

- See Appendix A for test data.
- The Average of the test data is the cispr average result.

KES-QP16-F01(00-23-01-01)

KES Co., Ltd.

The authenticity of the test report, contact kes@kes.co.kr



APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

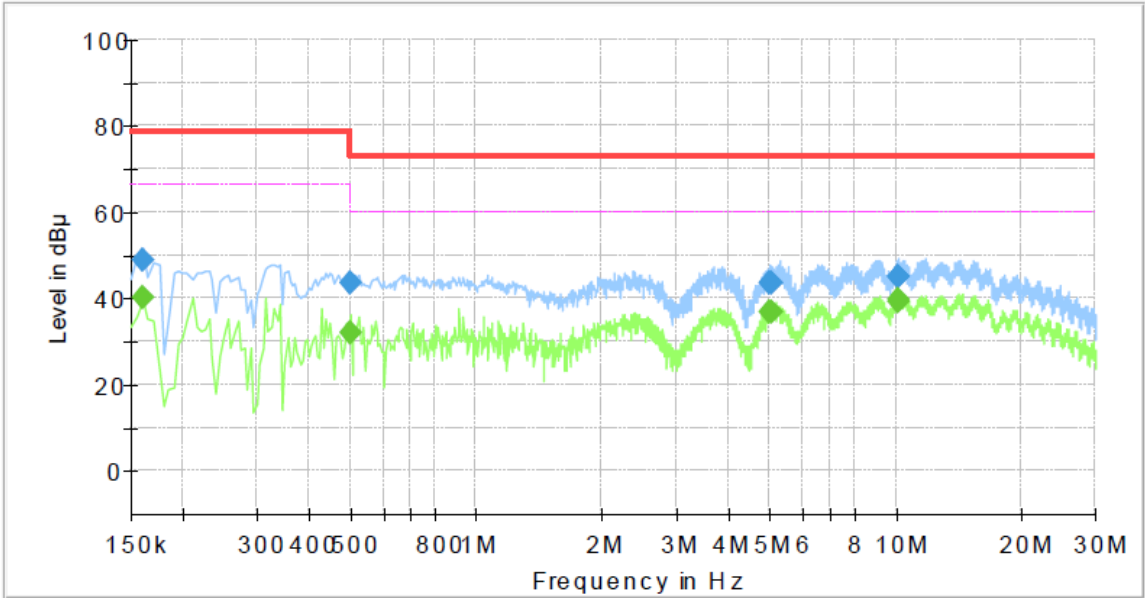
■ HDMI

HOT LINE

Common Information

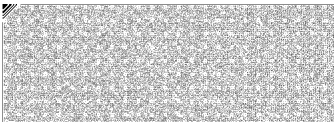
Test Description:
Model No.:
Phase:
Mode:
Operator Name:

Conducted Emission
SMT-3215
L1
HDMI
KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.160000	---	40.19	66.00	25.81	1000.0	9.000	L1	19.4
0.160000	48.65	---	79.00	30.35	1000.0	9.000	L1	19.4
0.500000	---	31.88	66.00	34.12	1000.0	9.000	L1	19.5
0.500000	43.59	---	73.00	29.41	1000.0	9.000	L1	19.5
5.040000	---	36.84	60.00	23.16	1000.0	9.000	L1	19.8
5.040000	43.48	---	73.00	29.52	1000.0	9.000	L1	19.8
5.085000	---	36.98	60.00	23.02	1000.0	9.000	L1	19.8
5.085000	43.64	---	73.00	29.36	1000.0	9.000	L1	19.8
10.135000	---	39.61	60.00	20.39	1000.0	9.000	L1	20.0
10.135000	45.06	---	73.00	27.94	1000.0	9.000	L1	20.0
10.140000	---	39.45	60.00	20.55	1000.0	9.000	L1	20.0
10.140000	44.89	---	73.00	28.11	1000.0	9.000	L1	20.0

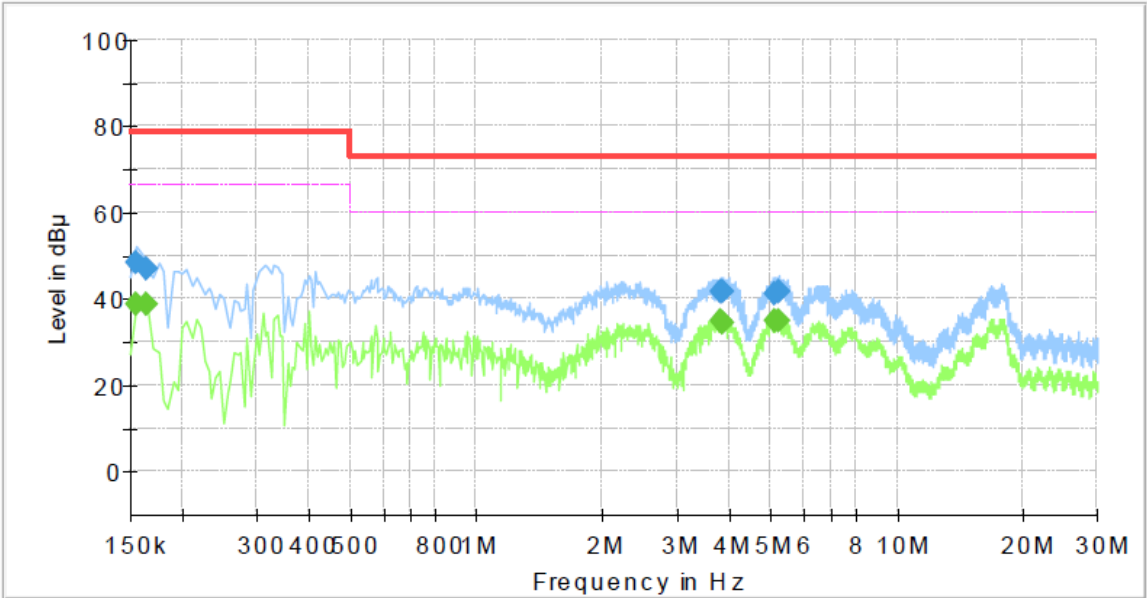


NEUTRAL LINE

Common Information

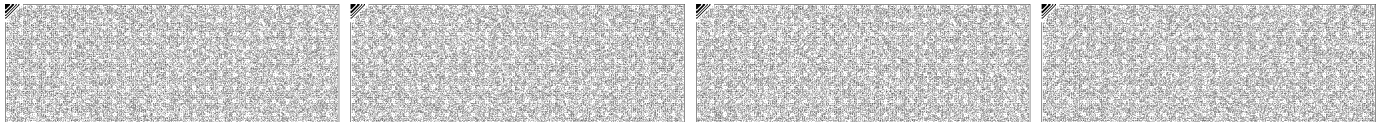
Test Description:
Model No.:
Phase:
Mode:
Operator Name:

Conducted Emission
SMT-3215
N
HDMI
KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.155000	---	38.52	66.00	27.48	1000.0	9.000	N	19.3
0.155000	48.49	---	79.00	30.51	1000.0	9.000	N	19.3
0.165000	---	38.57	66.00	27.43	1000.0	9.000	N	19.3
0.165000	46.79	---	79.00	32.21	1000.0	9.000	N	19.3
3.805000	---	34.71	60.00	25.29	1000.0	9.000	N	19.7
3.805000	41.84	---	73.00	31.16	1000.0	9.000	N	19.7
3.860000	---	34.60	60.00	25.40	1000.0	9.000	N	19.7
3.860000	41.71	---	73.00	31.29	1000.0	9.000	N	19.7
5.155000	---	34.78	60.00	25.22	1000.0	9.000	N	19.8
5.155000	41.16	---	73.00	31.84	1000.0	9.000	N	19.8
5.260000	---	34.77	60.00	25.23	1000.0	9.000	N	19.8
5.260000	41.52	---	73.00	31.48	1000.0	9.000	N	19.8



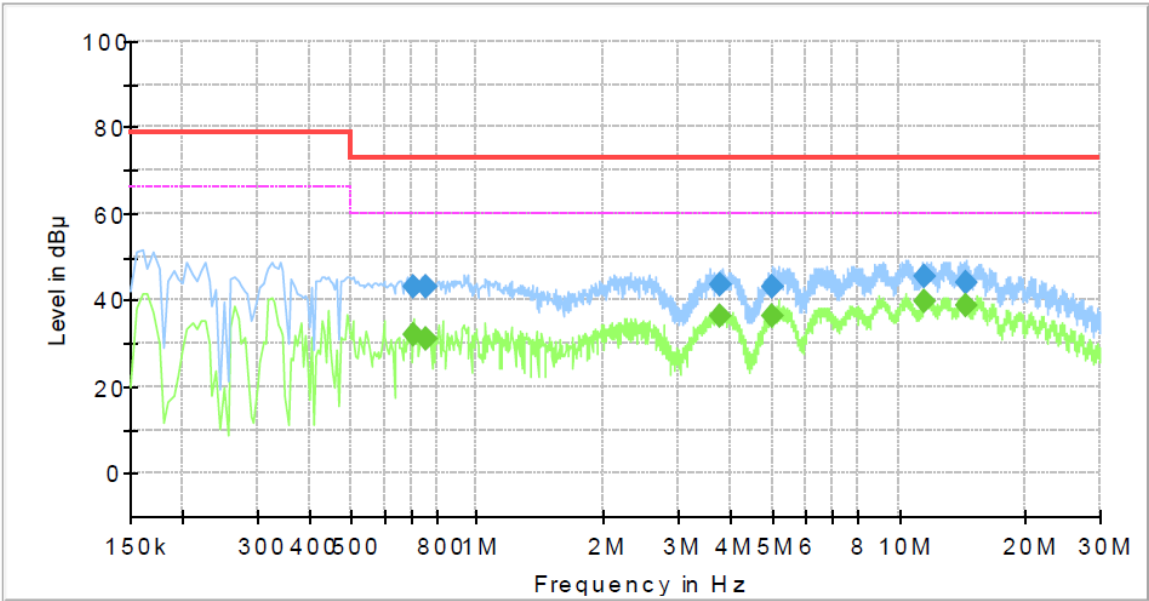
HOT LINE

■ VGA

Common Information

Test Description:
Model No.:
Phase:
Mode:
Operator Name:

Conducted Emission
SMT-3215
L1
VGA
KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.705000	---	31.92	60.00	28.08	1000.0	9.000	L1	19.5
0.705000	43.00	---	73.00	30.00	1000.0	9.000	L1	19.5
0.755000	---	30.90	60.00	29.10	1000.0	9.000	L1	19.5
0.755000	42.87	---	73.00	30.13	1000.0	9.000	L1	19.5
3.790000	---	36.23	60.00	23.77	1000.0	9.000	L1	19.7
3.790000	43.77	---	73.00	29.23	1000.0	9.000	L1	19.7
4.995000	---	36.32	60.00	23.68	1000.0	9.000	L1	19.8
4.995000	43.31	---	73.00	29.69	1000.0	9.000	L1	19.8
11.560000	---	39.82	60.00	20.18	1000.0	9.000	L1	20.0
11.560000	45.28	---	73.00	27.72	1000.0	9.000	L1	20.0
14.525000	---	38.55	60.00	21.45	1000.0	9.000	L1	20.1
14.525000	43.96	---	73.00	29.04	1000.0	9.000	L1	20.1

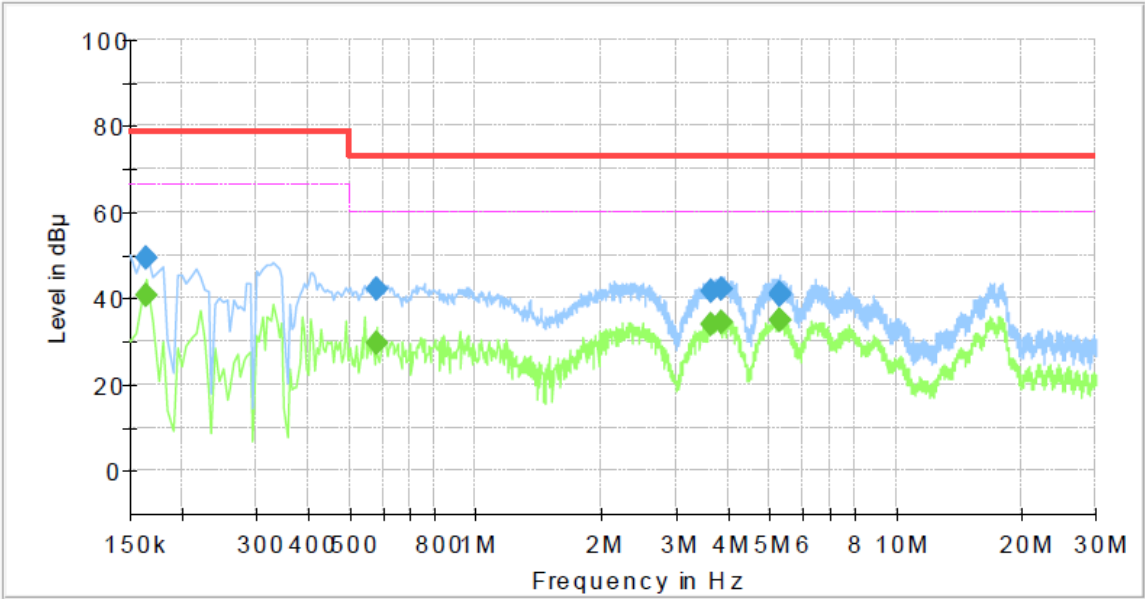


NEUTRAL LINE

Common Information

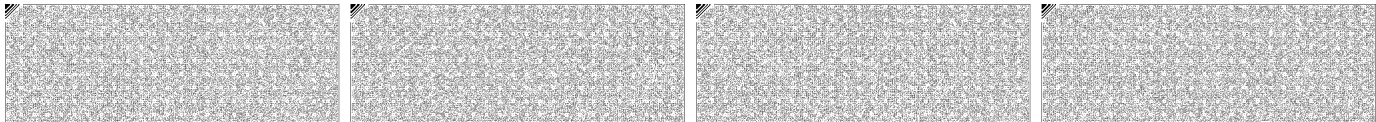
Test Description:
Model No.:
Phase:
Mode:
Operator Name:

Conducted Emission
SMT-3215
N
VGA
KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.165000	---	40.55	66.00	25.45	1000.0	9.000	N	19.3
0.165000	49.32	---	79.00	29.68	1000.0	9.000	N	19.3
0.580000	---	29.73	60.00	30.27	1000.0	9.000	N	19.4
0.580000	42.01	---	73.00	30.99	1000.0	9.000	N	19.4
3.655000	---	33.83	60.00	26.17	1000.0	9.000	N	19.7
3.655000	41.43	---	73.00	31.57	1000.0	9.000	N	19.7
3.855000	---	34.55	60.00	25.45	1000.0	9.000	N	19.7
3.855000	41.99	---	73.00	31.01	1000.0	9.000	N	19.7
5.300000	---	34.80	60.00	25.20	1000.0	9.000	N	19.8
5.300000	40.89	---	73.00	32.11	1000.0	9.000	N	19.8
5.305000	---	34.74	60.00	25.26	1000.0	9.000	N	19.8
5.305000	41.08	---	73.00	31.92	1000.0	9.000	N	19.8



HOT LINE

■ DisplayPort

Common Information

Test Description:

Model No.:

Phase:

Mode:

Operator Name:

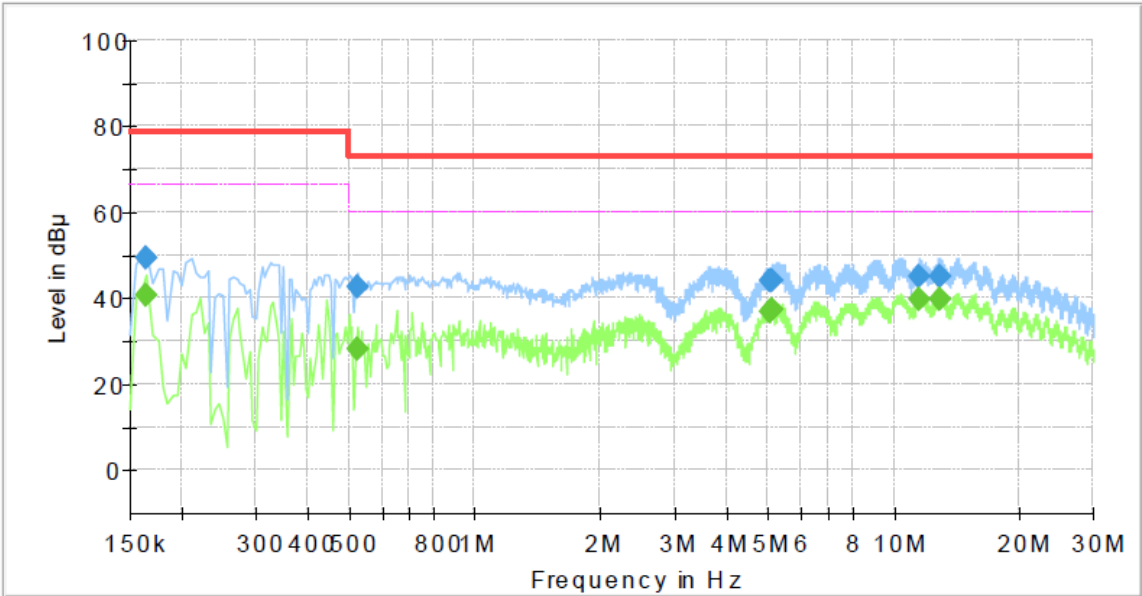
Conducted Emission

SMT-3215

L1

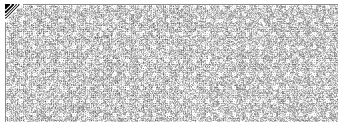
DisplayPort

KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.165000	---	40.73	66.00	25.27	1000.0	9.000	L1	19.4
0.165000	49.11	---	79.00	29.89	1000.0	9.000	L1	19.4
0.525000	---	28.33	60.00	31.67	1000.0	9.000	L1	19.5
0.525000	42.36	---	73.00	30.64	1000.0	9.000	L1	19.5
5.100000	---	36.94	60.00	23.06	1000.0	9.000	L1	19.8
5.100000	44.16	---	73.00	28.84	1000.0	9.000	L1	19.8
5.120000	---	37.07	60.00	22.93	1000.0	9.000	L1	19.8
5.120000	44.03	---	73.00	28.97	1000.0	9.000	L1	19.8
11.555000	---	39.83	60.00	20.17	1000.0	9.000	L1	20.0
11.555000	45.19	---	73.00	27.81	1000.0	9.000	L1	20.0
12.900000	---	39.83	60.00	20.17	1000.0	9.000	L1	20.1
12.900000	45.11	---	73.00	27.89	1000.0	9.000	L1	20.1

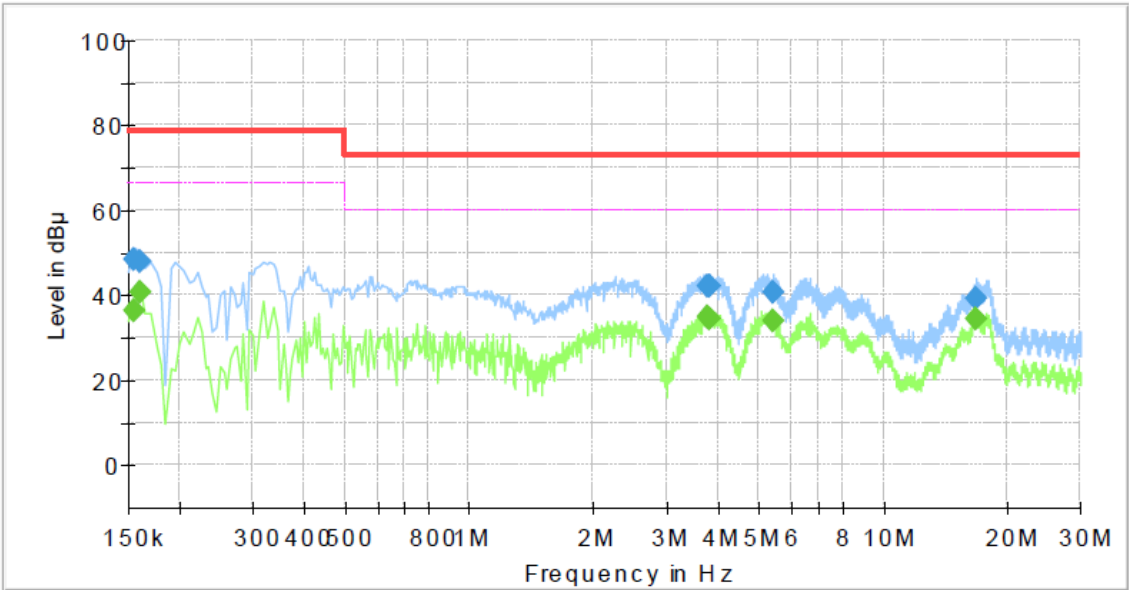


NEUTRAL LINE

Common Information

Test Description:
Model No.:
Phase:
Mode:
Operator Name:

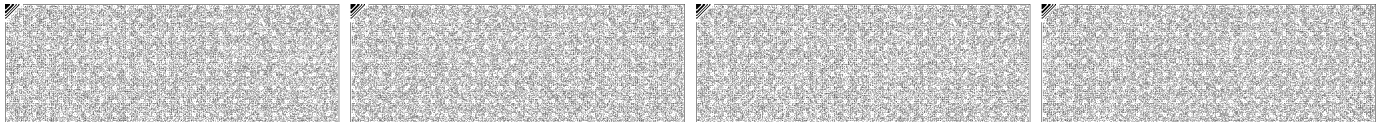
Conducted Emission
SMT-3215
N
DisplayPort
KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.155000	---	36.13	66.00	29.87	1000.0	9.000	N	19.3
0.155000	48.57	---	79.00	30.43	1000.0	9.000	N	19.3
0.160000	---	40.73	66.00	25.27	1000.0	9.000	N	19.3
0.160000	47.87	---	79.00	31.13	1000.0	9.000	N	19.3
3.750000	---	34.84	60.00	25.16	1000.0	9.000	N	19.7
3.750000	41.94	---	73.00	31.06	1000.0	9.000	N	19.7
3.830000	---	34.54	60.00	25.46	1000.0	9.000	N	19.7
3.830000	42.16	---	73.00	30.84	1000.0	9.000	N	19.7
5.410000	---	34.14	60.00	25.86	1000.0	9.000	N	19.8
5.410000	40.88	---	73.00	32.12	1000.0	9.000	N	19.8
16.800000	---	34.17	60.00	25.83	1000.0	9.000	N	20.2
16.800000	39.43	---	73.00	33.57	1000.0	9.000	N	20.2

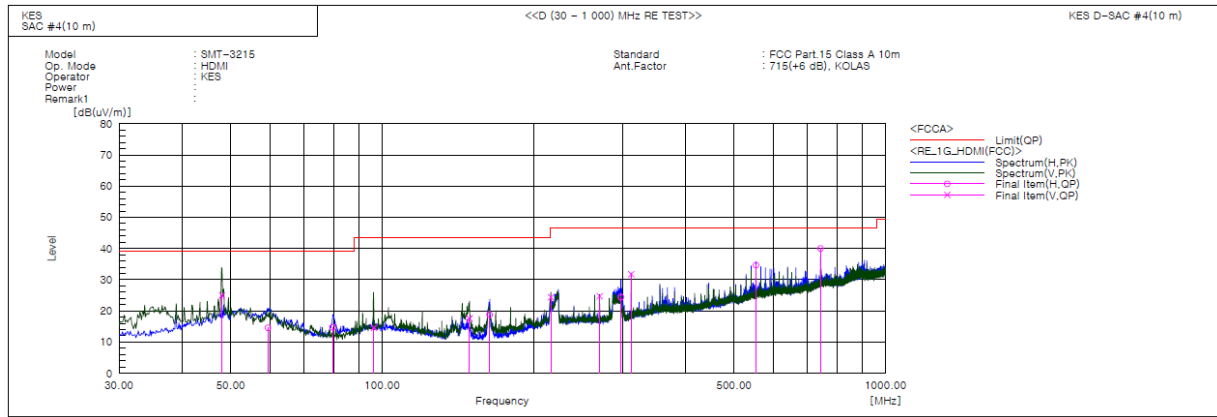
◆ Calculation
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (LISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))



Radiated Electric Field Emissions(Below 1 GHz)

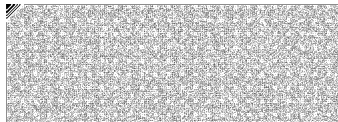
- 47 CFR Part 15, Subpart B

■ HDMI

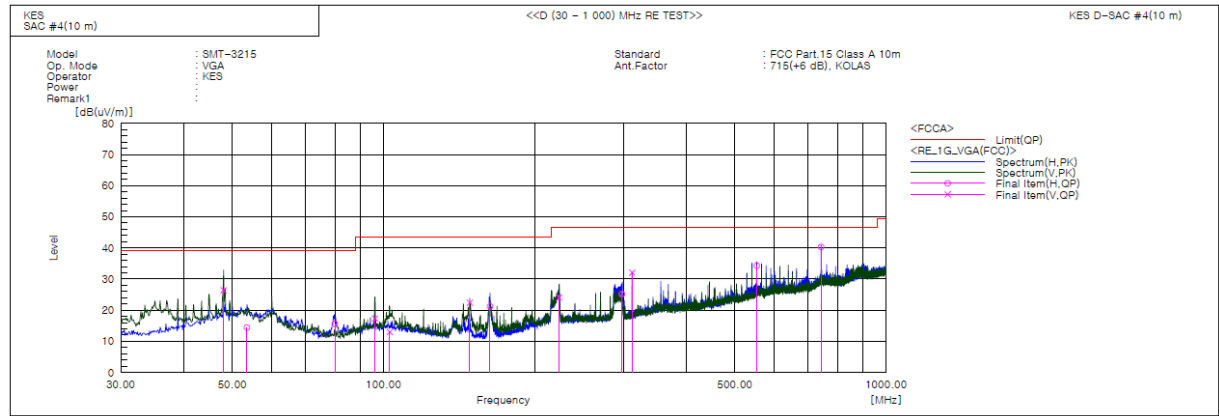


Final Result

No.	Frequency	(P)	Reading	c.f	Result	Limit	Margin	Height	Angle	Remark
	[MHz]		QP		QP	QP	QP	[cm]	[deg]	
			[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]			
1	48.030	V	46.1	-21.1	25.0	39.0	14.0	107.0	303.0	
2	59.284	H	36.5	-21.9	14.6	39.0	24.4	386.0	277.0	
3	79.762	H	42.3	-27.6	14.7	39.0	24.3	391.0	213.0	
4	96.203	V	37.2	-22.6	14.6	43.5	28.9	102.0	218.0	
5	149.046	V	42.7	-25.1	17.6	43.5	25.9	108.0	218.0	
6	163.416	H	43.4	-24.6	18.8	43.5	24.7	384.0	344.0	
7	216.328	V	44.0	-19.6	24.4	46.5	22.1	107.0	188.0	
8	270.333	V	43.1	-18.4	24.7	46.5	21.8	114.0	233.0	
9	298.257	H	41.9	-17.5	24.4	46.5	22.1	394.0	128.0	
10	312.472	V	48.7	-16.9	31.8	46.5	14.7	103.0	184.0	
11	552.979	H	44.4	-9.7	34.7	46.5	11.8	390.0	290.0	
12	742.503	H	45.2	-5.2	40.0	46.5	6.5	396.0	76.0	

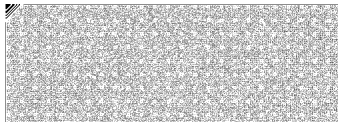


VGA

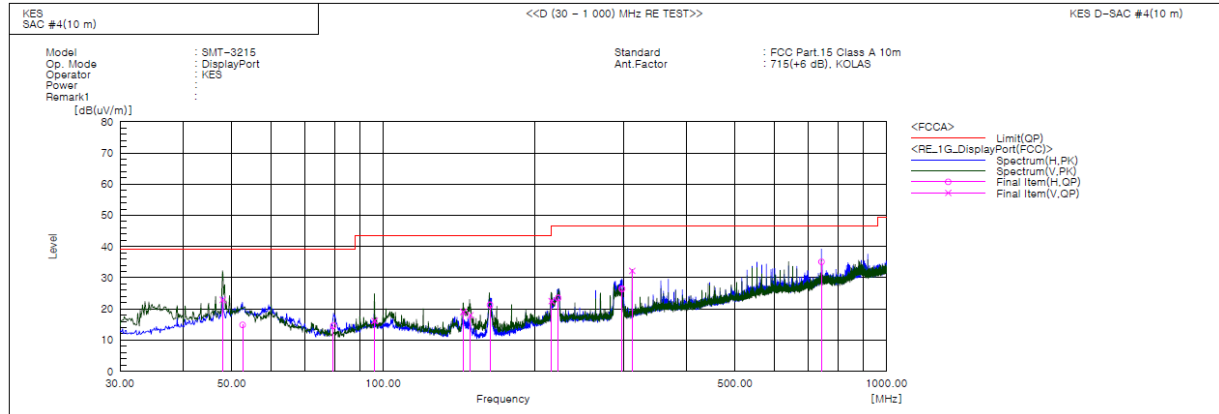


Final Result

No.	Frequency	(P)	Reading	c.f	Result	Limit	Margin	Height	Angle	Remark
	[MHz]		QP		QP	QP	QP			
			[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[cm]	[deg]	
1	48.045	V	47.5	-21.1	26.4	39.0	12.6	114.0	274.0	
2	53.469	H	35.5	-21.1	14.4	39.0	24.6	396.0	308.0	
3	79.985	H	43.2	-27.6	15.6	39.0	23.4	387.0	198.0	
4	96.149	V	39.9	-22.6	17.3	43.5	26.2	103.0	157.0	
5	102.870	V	35.4	-22.4	13.0	43.5	30.5	105.0	358.0	
6	148.520	V	47.5	-25.1	22.4	43.5	21.1	106.0	211.0	
7	162.910	H	45.8	-24.6	21.2	43.5	22.3	394.0	330.0	
8	223.613	V	43.4	-19.3	24.1	46.5	22.4	107.0	301.0	
9	298.235	H	42.7	-17.5	25.2	46.5	21.3	389.0	33.0	
10	312.482	V	49.0	-16.9	32.1	46.5	14.4	115.0	189.0	
11	552.965	H	44.0	-9.7	34.3	46.5	12.2	391.0	307.0	
12	742.495	H	45.5	-5.2	40.3	46.5	6.2	394.0	74.0	

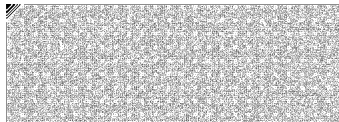


DisplayPort



Final Result

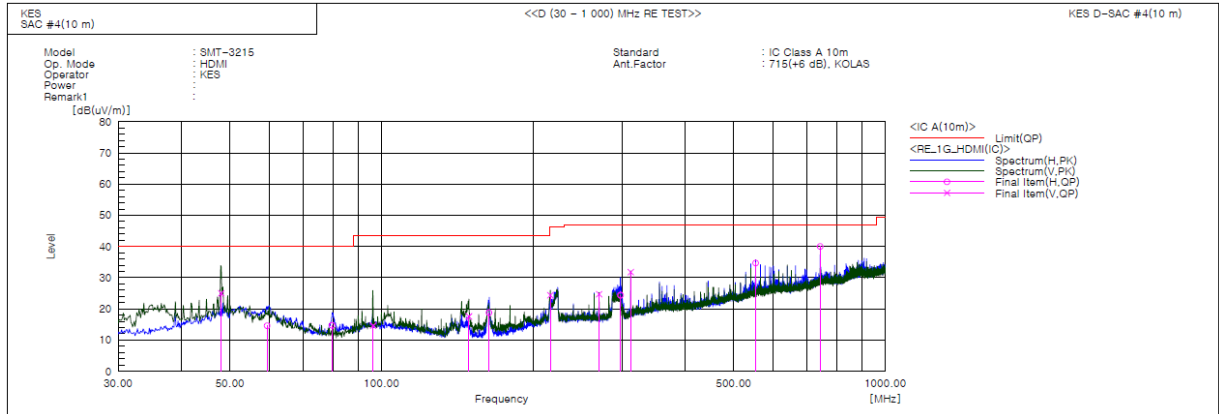
No.	Frequency [MHz]	(P)	Reading QP [dB(μV)]	c.f [dB(1/m)]	Result QP [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	47.997	V	44.0	-21.1	22.9	39.0	16.1	106.0	285.0	
2	52.585	H	36.0	-21.1	14.9	39.0	24.1	395.0	308.0	
3	79.616	H	42.2	-27.6	14.6	39.0	24.4	387.0	191.0	
4	96.180	V	38.8	-22.6	16.2	43.5	27.3	117.0	153.0	
5	144.251	V	44.2	-25.2	19.0	43.5	24.5	102.0	299.0	
6	149.028	V	43.1	-25.1	18.0	43.5	25.5	113.0	169.0	
7	163.054	H	45.9	-24.6	21.3	43.5	22.2	397.0	326.0	
8	216.010	V	42.2	-19.7	22.5	46.5	24.0	108.0	184.0	
9	222.797	H	42.9	-19.4	23.5	46.5	23.0	392.0	178.0	
10	298.178	H	43.9	-17.5	26.4	46.5	20.1	386.0	137.0	
11	312.482	V	49.1	-16.9	32.2	46.5	14.3	104.0	188.0	
12	742.491	H	40.3	-5.2	35.1	46.5	11.4	384.0	54.0	



Report No. : KES-EM-23T1080

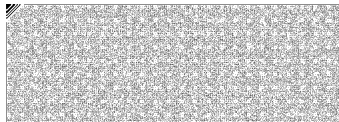
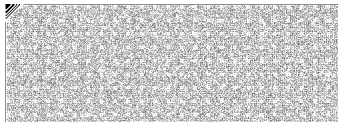
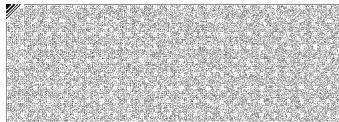
- IC Regulation ICES-003 Issue 7

■ HDMI

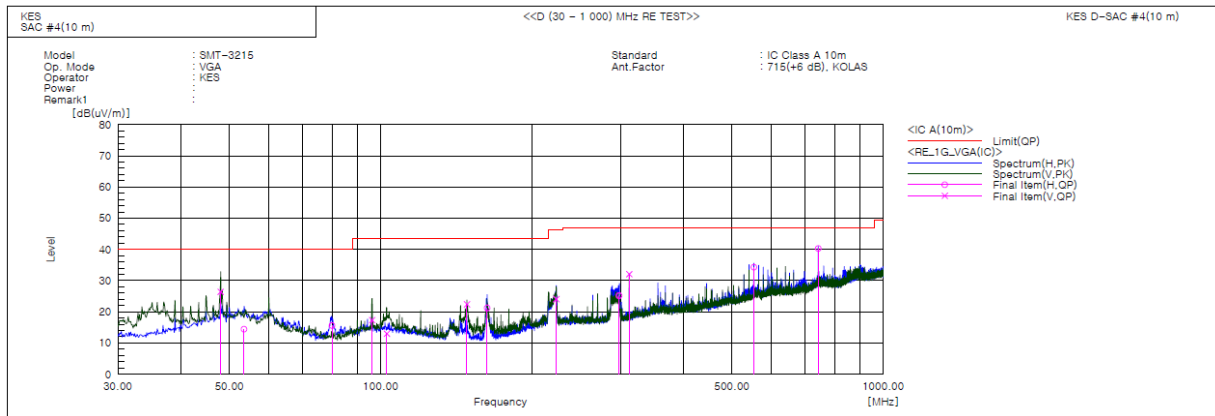


Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	48.030	V	46.1	-21.1	25.0	40.0	15.0	107.0	303.0	
2	59.284	H	36.5	-21.9	14.6	40.0	25.4	386.0	277.0	
3	79.762	H	42.3	-27.6	14.7	40.0	25.3	391.0	213.0	
4	96.203	V	37.2	-22.6	14.6	43.5	28.9	102.0	218.0	
5	149.046	V	42.7	-25.1	17.6	43.5	25.9	108.0	218.0	
6	163.416	H	43.4	-24.6	18.8	43.5	24.7	384.0	344.0	
7	216.328	V	44.0	-19.6	24.4	46.4	22.0	107.0	188.0	
8	270.333	V	43.1	-18.4	24.7	47.0	22.3	114.0	233.0	
9	298.257	H	41.9	-17.5	24.4	47.0	22.6	394.0	128.0	
10	312.472	V	48.7	-16.9	31.8	47.0	15.2	103.0	184.0	
11	552.979	H	44.4	-9.7	34.7	47.0	12.3	390.0	290.0	
12	742.503	H	45.2	-5.2	40.0	47.0	7.0	396.0	76.0	

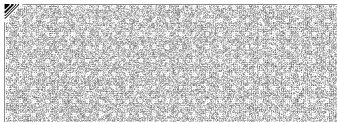
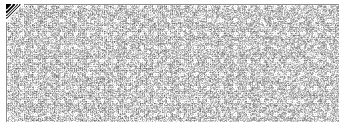


VGA

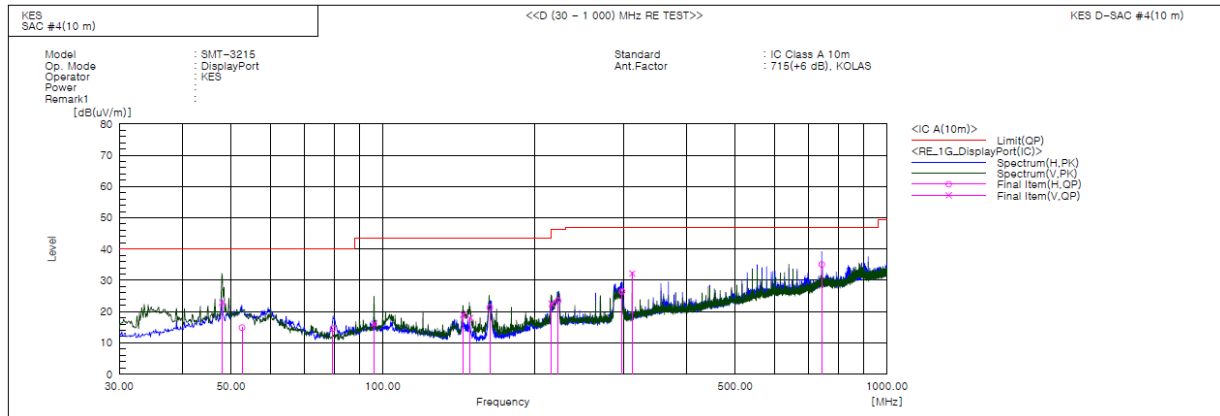


Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	48.045	V	47.5	-21.1	26.4	40.0	13.6	114.0	274.0	
2	53.469	H	35.5	-21.1	14.4	40.0	25.6	396.0	308.0	
3	79.985	H	43.2	-27.6	15.6	40.0	24.4	387.0	198.0	
4	96.149	V	39.9	-22.6	17.3	43.5	26.2	103.0	157.0	
5	102.870	V	35.4	-22.4	13.0	43.5	30.5	105.0	358.0	
6	148.520	V	47.5	-25.1	22.4	43.5	21.1	106.0	211.0	
7	162.910	H	45.8	-24.6	21.2	43.5	22.3	394.0	330.0	
8	223.613	V	43.4	-19.3	24.1	46.4	22.3	107.0	301.0	
9	298.235	H	42.7	-17.5	25.2	47.0	21.8	389.0	33.0	
10	312.482	V	49.0	-16.9	32.1	47.0	14.9	115.0	189.0	
11	552.965	H	44.0	-9.7	34.3	47.0	12.7	391.0	307.0	
12	742.495	H	45.5	-5.2	40.3	47.0	6.7	394.0	74.0	



DisplayPort



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	47.997	V	44.0	-21.1	22.9	40.0	17.1	106.0	285.0	
2	52.585	H	36.0	-21.1	14.9	40.0	25.1	395.0	308.0	
3	79.616	H	42.2	-27.6	14.6	40.0	25.4	387.0	191.0	
4	96.180	V	38.8	-22.6	16.2	43.5	27.3	117.0	153.0	
5	144.251	V	44.2	-25.2	19.0	43.5	24.5	102.0	299.0	
6	149.028	V	43.1	-25.1	18.0	43.5	25.5	113.0	169.0	
7	163.054	H	45.9	-24.6	21.3	43.5	22.2	397.0	326.0	
8	216.010	V	42.2	-19.7	22.5	46.4	23.9	108.0	184.0	
9	222.797	H	42.9	-19.4	23.5	46.4	22.9	392.0	178.0	
10	298.178	H	43.9	-17.5	26.4	47.0	20.6	386.0	137.0	
11	312.482	V	49.1	-16.9	32.2	47.0	14.8	104.0	188.0	
12	742.491	H	40.3	-5.2	35.1	47.0	11.9	384.0	54.0	

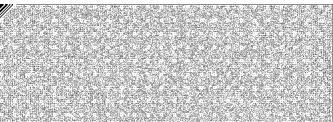
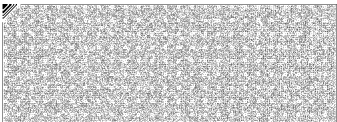
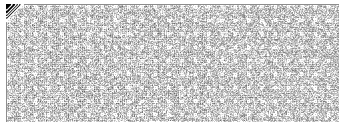
Calculation

Result(QP) [dB(uV/m)] = (Reading(QP)[dB(uV)] + c.f[dB(1/m)])

Margin(QP)[dB] = Limit[dB(uV/m)] - Result(QP) [dB(uV/m)]

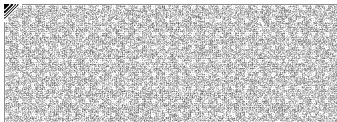
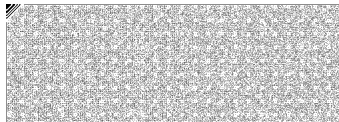
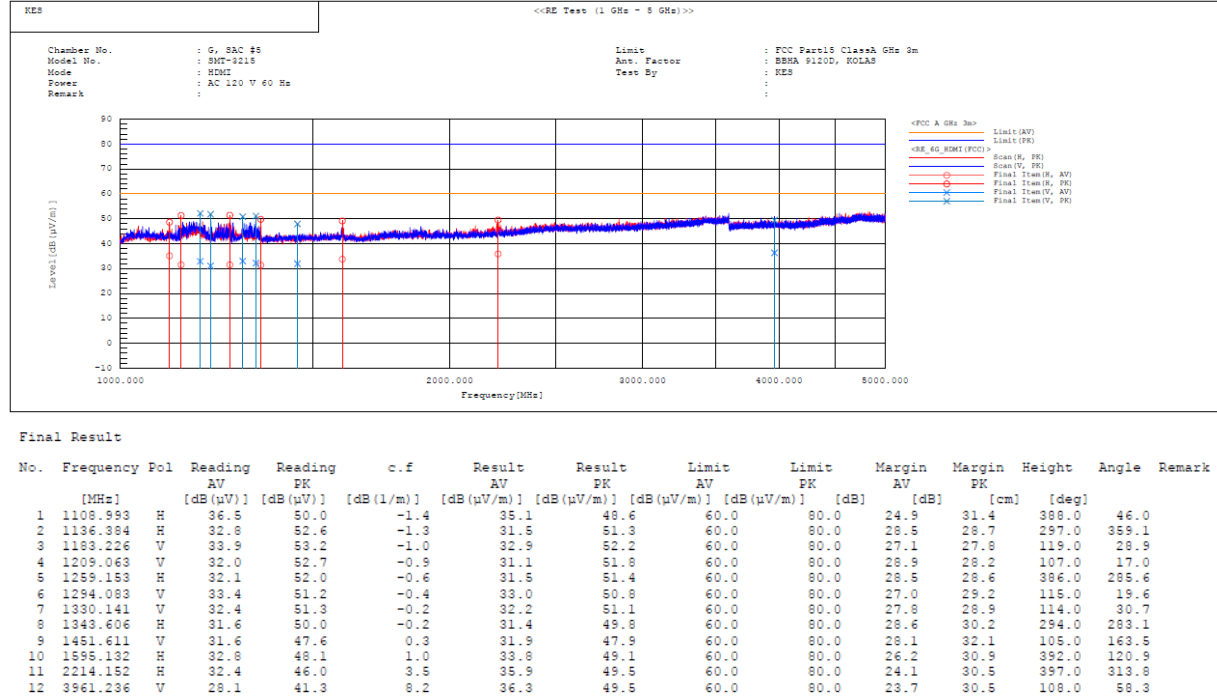
Reading(QP) : Reading value, Result(QP) : Reading value + Factor value

Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value

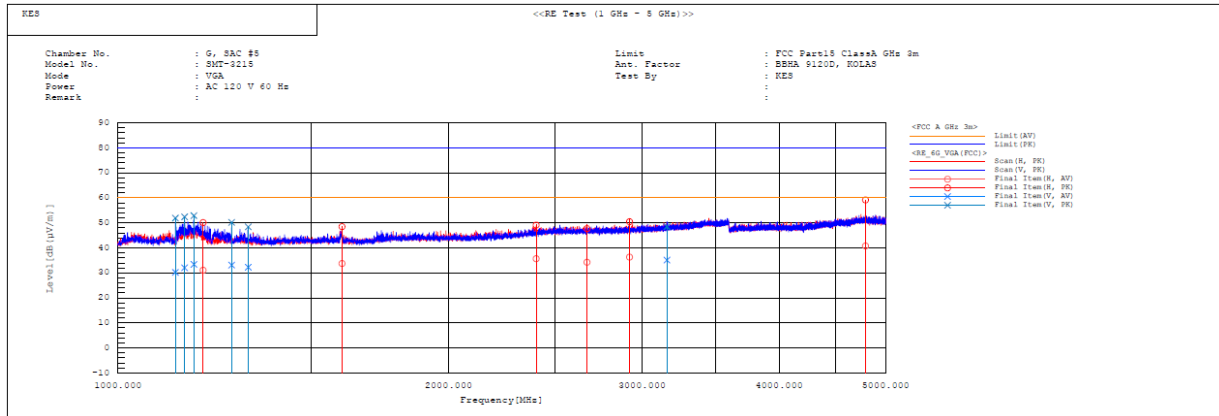


Radiated Electric Field Emissions(Above 1 GHz)

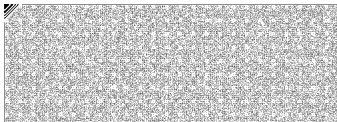
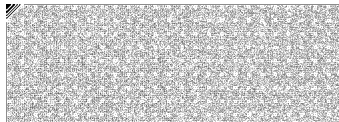
HDMI



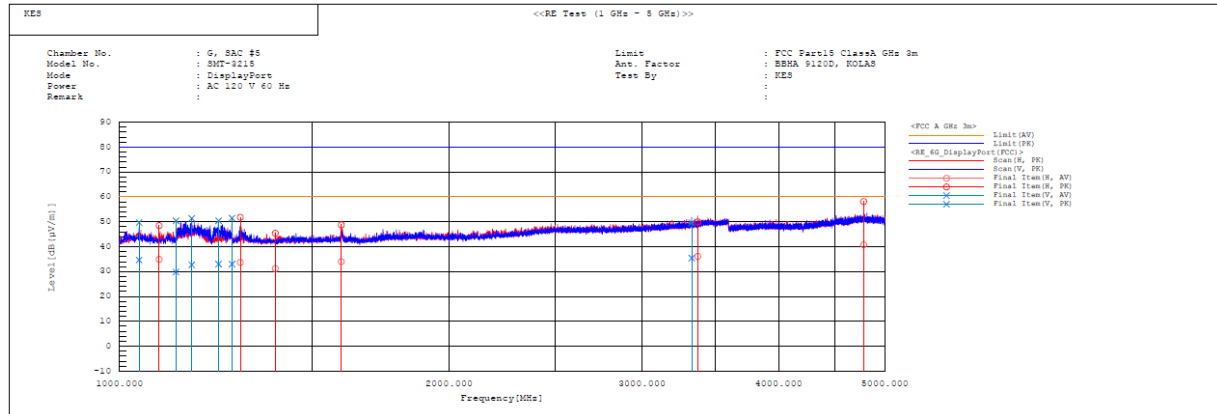
VGA



Final Result														
No.	Frequency	Pol	Reading AV	Reading PK	c.f	Result AV	Result PK	Limit AV	Limit PK	Margin AV	Margin PK	Height	Angle	Remark
	[MHz]		[dB (μV)]	[dB (μV)]	[dB (1/m)]	[dB (μV/m)]	[dB (μV/m)]	[dB (μV/m)]	[dB (μV/m)]	[dB]	[dB]	[cm]	[deg]	
1	1128.154	V	31.5	53.2	-1.3	30.2	51.9	60.0	80.0	29.8	28.1	115.0	193.0	
2	1150.045	V	33.3	53.6	-1.2	32.1	52.4	60.0	80.0	27.9	27.6	107.0	182.5	
3	1172.494	V	34.5	54.0	-1.1	33.4	52.9	60.0	80.0	26.6	27.1	110.0	348.4	
4	1195.506	H	32.0	51.0	-0.9	31.1	50.1	60.0	80.0	28.9	29.9	291.0	283.9	
5	1269.156	V	33.6	50.7	-0.5	33.1	50.2	60.0	80.0	26.9	29.8	113.0	28.3	
6	1314.047	V	32.6	48.7	-0.3	32.3	48.4	60.0	80.0	27.7	31.6	108.0	28.3	
7	1599.228	H	32.8	47.5	1.0	33.8	48.5	60.0	80.0	26.2	31.5	293.0	266.0	
8	2403.152	H	31.4	44.8	4.3	35.7	49.1	60.0	80.0	24.3	30.9	297.0	45.8	
9	2672.773	H	29.1	42.5	5.2	34.3	47.7	60.0	80.0	25.7	32.3	286.0	249.3	
10	2921.927	H	30.3	44.5	6.0	36.3	50.5	60.0	80.0	23.7	29.5	286.0	59.1	
11	3160.783	V	28.6	42.0	6.5	35.1	48.5	60.0	80.0	24.9	31.5	102.0	357.0	
12	4792.331	H	29.3	47.7	11.5	40.8	59.2	60.0	80.0	19.2	20.8	293.0	168.0	



DisplayPort



Final Result

No.	Frequency [MHz]	Pol	Reading AV [dB(μV)]	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result AV [dB(μV/m)]	Result PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Limit PK [dB(μV/m)]	Margin AV [dB]	Margin PK [dB]	Height [cm]	Angle [deg]	Remark
1	1041.953	V	36.4	51.5	-1.8	34.6	49.7	60.0	80.0	25.4	30.3	109.0	340.9	
2	1086.868	H	36.4	50.0	-1.5	34.9	48.5	60.0	80.0	25.1	31.5	387.0	49.6	
3	1126.391	V	31.1	51.7	-1.3	29.8	50.4	60.0	80.0	30.2	29.6	114.0	194.6	
4	1164.012	V	33.8	52.5	-1.1	32.7	51.4	60.0	80.0	27.3	28.6	117.0	349.9	
5	1231.722	V	33.7	51.1	-0.7	33.0	50.4	60.0	80.0	27.0	29.6	105.0	32.2	
6	1266.886	V	33.5	52.0	-0.5	33.0	51.5	60.0	80.0	27.0	28.5	108.0	32.8	
7	1289.374	H	34.1	52.2	-0.4	33.7	51.8	60.0	80.0	26.3	28.2	397.0	36.8	
8	1387.654	H	31.1	45.3	0.1	31.2	45.4	60.0	80.0	28.8	34.6	385.0	359.7	
9	1594.370	H	33.0	47.8	1.0	34.0	48.8	60.0	80.0	26.0	31.2	387.0	150.7	
10	3331.111	V	28.7	42.9	6.7	35.4	49.6	60.0	80.0	24.6	30.4	102.0	355.6	
11	3373.640	H	29.3	43.2	6.8	36.1	50.0	60.0	80.0	23.9	30.0	297.0	0.5	
12	4781.973	H	29.3	46.6	11.5	40.8	58.1	60.0	80.0	19.2	21.9	295.0	162.9	

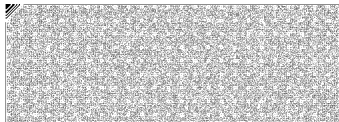
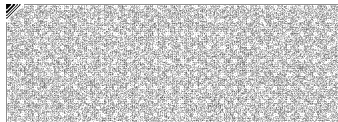
Calculation

Result(PK/CAV) [dB(μV/m)] = (Reading(PK/CAV)[dB(μV)] + c.f[dB(1/m)]

Margin(PK/CAV)[dB] = Limit[dB(μV/m)] - Result(PK/CAV) [dB(μV/m)]

Reading(PK/CAV) : Reading value, Result(PK/CAV) : Reading value + Factor value

Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value



Report No. : KES-EM-23T1080

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Test Setup Photos and Configuration

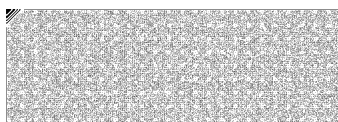
Conducted Emissions at Mains Power Ports



KES-QP16-F01(00-23-01-01)

KES Co., Ltd.

The authenticity of the test report, contact kes@kes.co.kr



Report No. : KES-EM-23T1080

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Radiated Electric Field Emissions(Below 1 GHz)



KES-QP16-F01(00-23-01-01)

KES Co., Ltd.

The authenticity of the test report, contact kes@kes.co.kr



Report No. : KES-EM-23T1080

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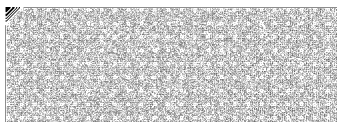
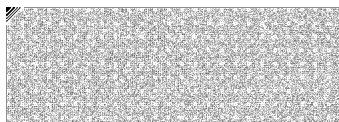
Radiated Electric Field Emissions(Above 1 GHz)



KES-QP16-F01(00-23-01-01)

KES Co., Ltd.

The authenticity of the test report, contact kes@kes.co.kr



Report No. : KES-EM-23T1080

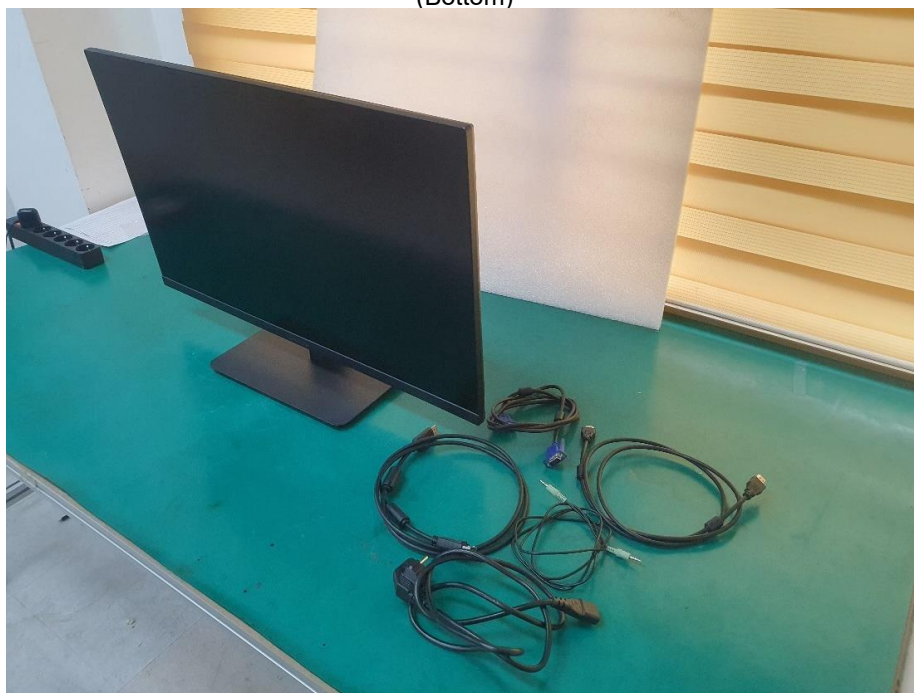
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EUT External Photographs

(Top)



(Bottom)



KES-QP16-F01(00-23-01-01)

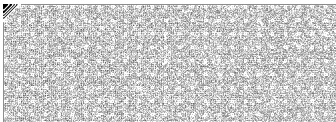
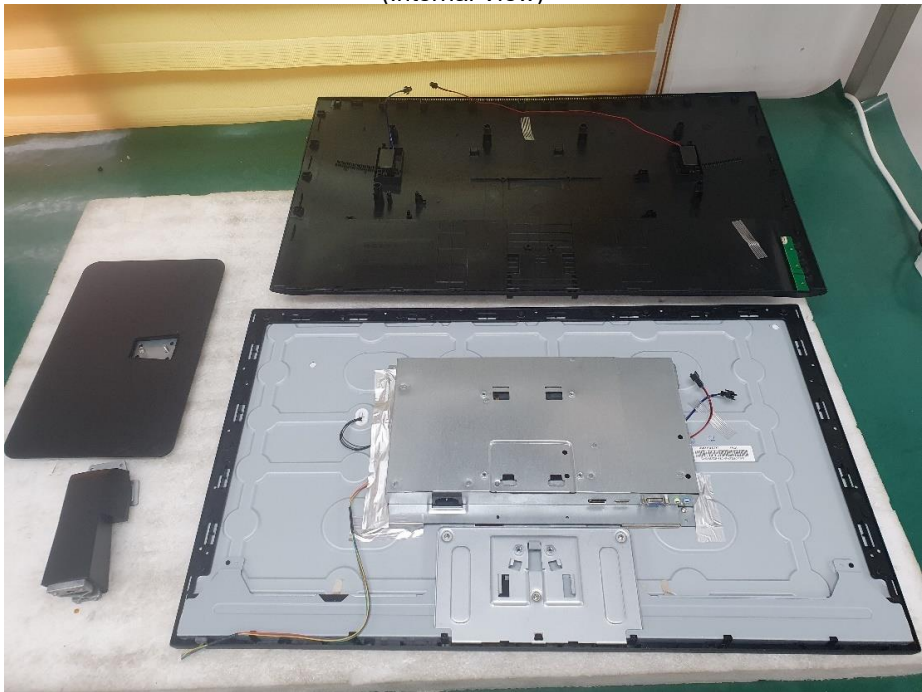
KES Co., Ltd.

The authenticity of the test report, contact kes@kes.co.kr



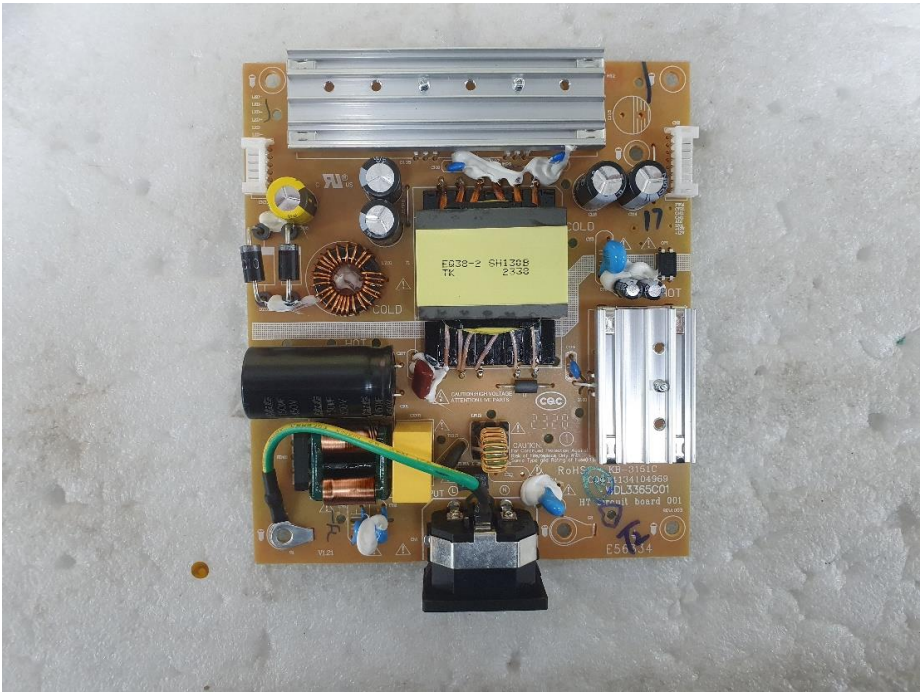
EUT Internal Photographs

(Internal View)

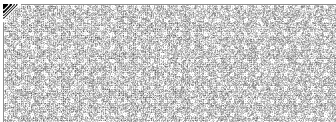
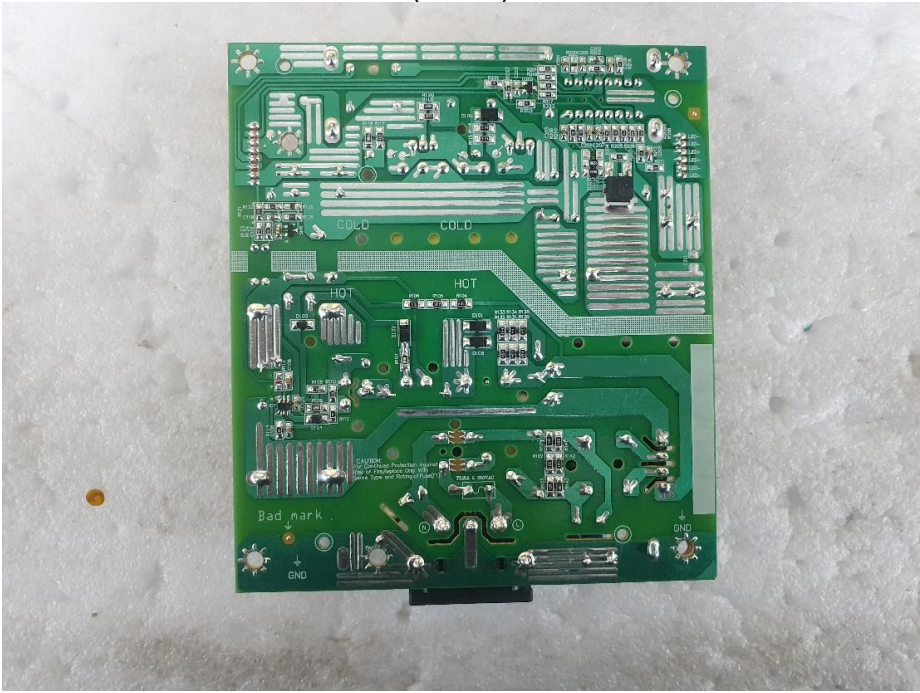


EUT Internal View – Main Board

(Top)

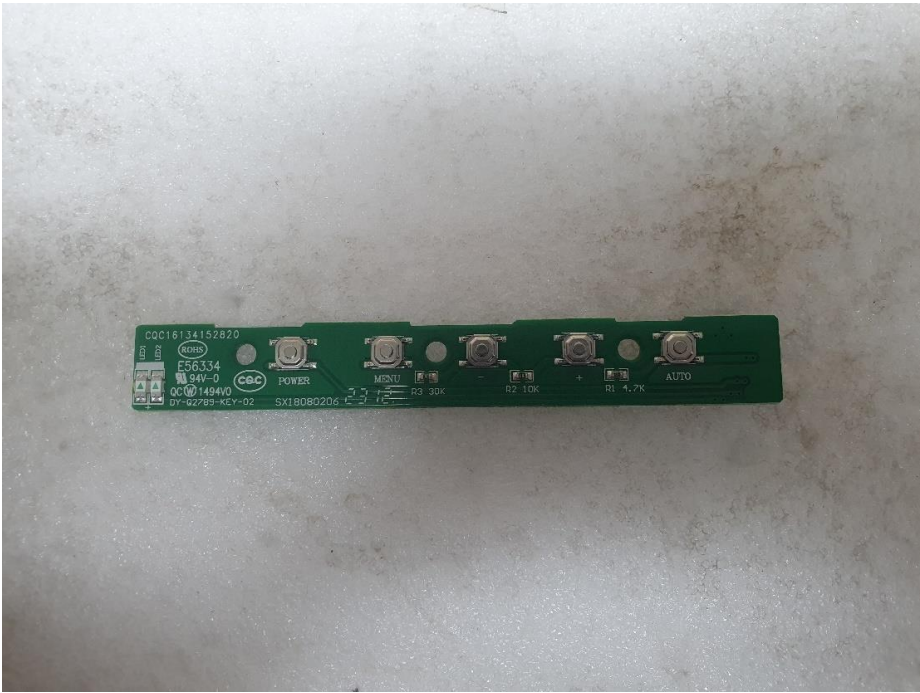


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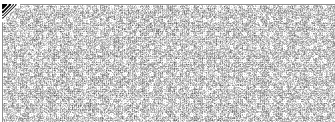


EUT Internal View – Serves Board 1

(Top)

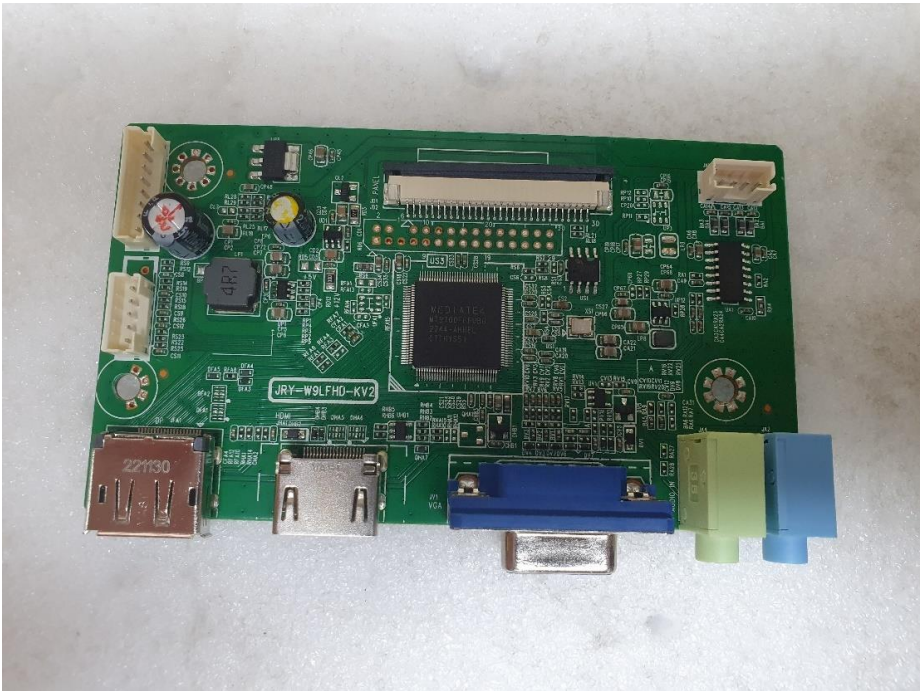


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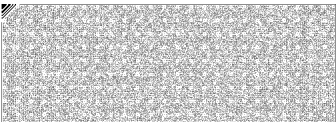
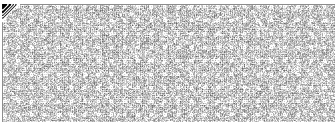
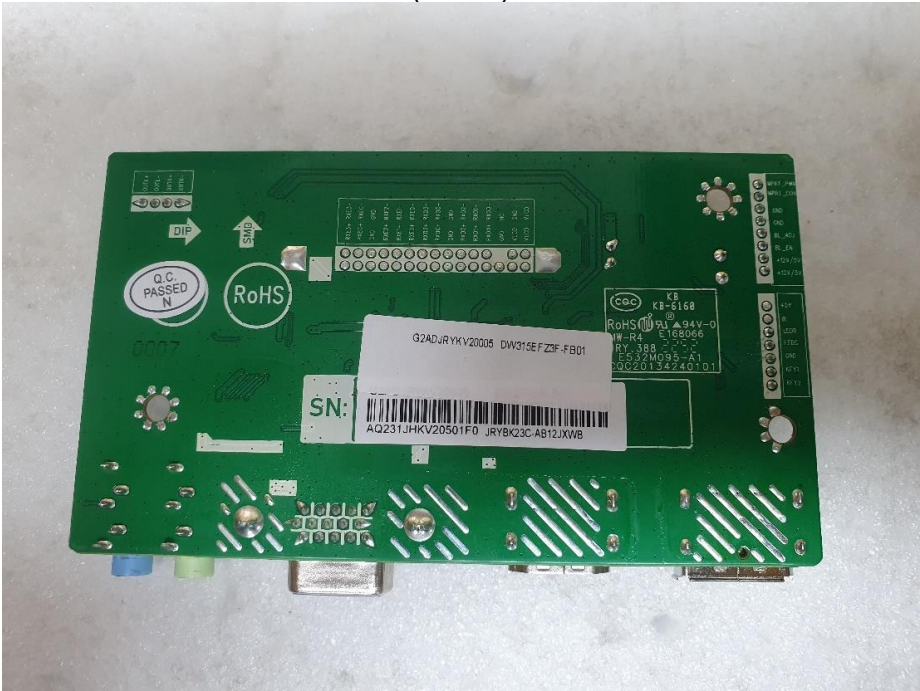


EUT Internal View – Serves Board 2

(Top)



(Bottom)

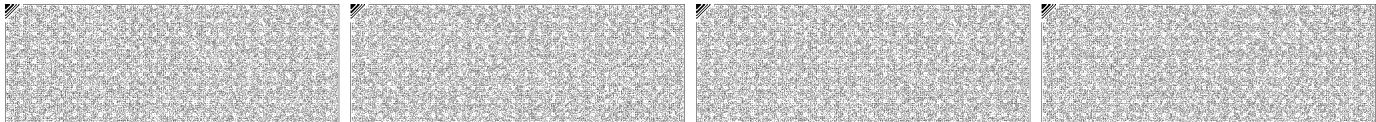


EUT Internal View – Serves Board 3

(Top)



(Bottom)



EUT Internal View – Speaker 1

(Top)



(Bottom)

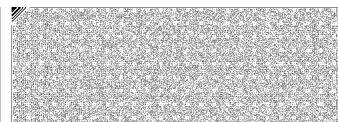
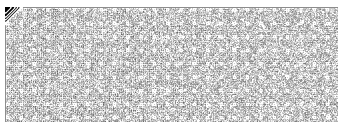


EUT Internal View – Speaker 2

(Top)



(Bottom)

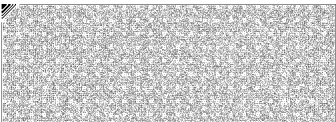
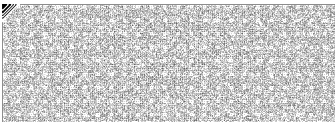
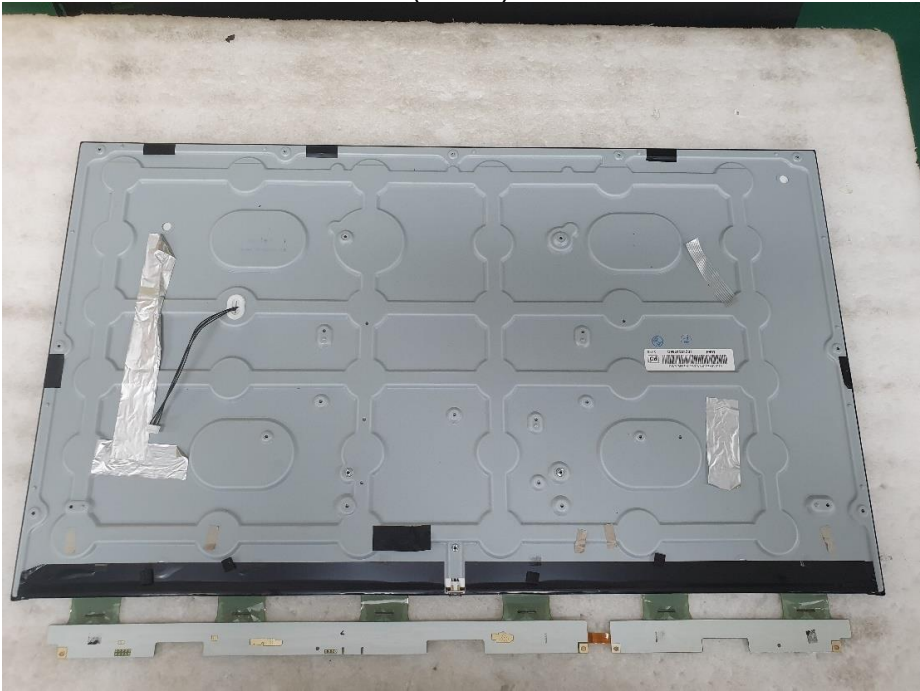


EUT Internal View – Panel

(Top)



(Bottom)



Label Photographs

FCC Label



Product name : LED MONITOR

Model/Type No. : SMT-3215

IC Label

CAN ICES-003(B) / NMB-003(B)

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

