



# **CE EMC Test Report**

Project No. : 1905C010 Equipment : LCD Monitor

**Test Model** : \*\*27G2\*\*\*\*\*\*\*(\*=A-Z,a-z,0-9,/, +,-,\ or blank)

Series Model : N/A

**Applicant**: TPV Electronics (Fujian) Co., Ltd.

Address : Rongqiao Economic and Technological Development

Zone, Fuging City, Fujian Province, P.R. China

Date of Receipt: May 08, 2019

**Date of Test** : May 14, 2019 ~ Jul. 10, 2019

Issued Date : Jul. 23 2019 Tested by : BTL Inc.

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Certificate #5123.02

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#### **Declaration**

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. BTL shall have no liability for any declarations, inferences or generalizations drawn by the client or others from BTL issued reports.

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BTL's laboratory quality assurance procedures are in compliance with the ISO/IEC 17025 requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

#### Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective. Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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# **REPORT ISSUED HISTORY**

Report Version	Description	Issued Date
R00	Original Issue.	Jul. 23 2019





#### 1. GENERAL SUMMARY

Equipment : LCD Monitor

Brand Name: N/A

Test Model : \*\*27G2\*\*\*\*\*\*(\*=A-Z,a-z,0-9,/, +,-,\ or blank)

Series Model: N/A

: TPV Electronics (Fujian) Co., Ltd. Applicant Date of Test : May 14, 2019 ~ Jul. 10, 2019

Test Sample: Engineering Sample No.: D190504718 Standard(s) : EN 55032:2012+AC:2013 Class B

EN 55032:2015 Class B

EN 55032:2015+AC:2016 Class B

IEC 61000-3-2:2014 / EN 61000-3-2:2014 Class D

IEC 61000-3-3:2013 / EN 61000-3-3:2013

EN 55024:2010

EN 55024:2010+A1:2015

IEC 61000-4-2:2008 / EN 61000-4-2:2009 IEC 61000-4-3:2006+A1:2007+A2:2010 / EN 61000-4-3:2006+A1:2008+A2:2010 IEC 61000-4-4:2004 / EN 61000-4-4:2004 IEC 61000-4-5:2005 / EN 61000-4-5:2006 IEC 61000-4-6:2008 / EN 61000-4-6:2009 IEC 61000-4-8:2009 / EN 61000-4-8:2010 IEC 61000-4-11:2004 / EN 61000-4-11:2004

AS/NZS CISPR 32:2015 / CISPR 32:2015+C1:2016

AS/NZS CISPR 32:2013 / CISPR 32:2012

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-EMC-1-1905C010) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of A2LA according to the ISO/IEC 17025 quality assessment standard and technical standard(s).

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# 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Emission						
Standard(s)	Test Item		Limit	Judgment	Remark	
	Radiated e up to 1		Class B	PASS		
	Radiated emissions above 1 GHz		Class B	PASS	NOTE (2)	
EN 55032: 2012+AC:2013	Radiated emissions from FM receivers			N/A	NOTE (1) NOTE (6)	
EN 55032:2015 EN 55032:2015+AC:2016	Conducted emissions AC mains power port		Class B	PASS	NOTE (7)	
AS/NZS CISPR 32:2015	Asymmetric	AAN		N/A		
AS/NZS CISPR 32:2013	mode conducted	Current Probe		N/A	NOTE (1) NOTE (8)	
	emissions	CVP		N/A		
	Conducted voltage er			N/A	NOTE (1) NOTE (9)	

Standard	Standard Test Item		Judgment	Remark
EN 61000-3-2:2014	61000-3-2:2014 Harmonic current emissions		PASS	NOTE (3)
EN 61000-3-3:2013	Voltage changes, voltage fluctuations and flicker		PASS	

Immunity EN 55024: 2010/ EN 55024: 2010+A1:2015				
Section(s)	Test Item	Performance Criterion	Judgment	Remark
EN 61000-4-2:2009	Electrostatic discharge immunity	В	PASS	
EN 61000-4-3: Radiated, radio-frequency, 2006+A1:2008+A2:2010 electromagnetic field immunity		А	PASS	
EN 61000-4-4:2004 Electrical fast transient/burst immunity		В	PASS	
EN 61000-4-5:2006 Surge immunity		B/C	PASS	NOTE (4)
EN 61000-4-6: 2009 Immunity to conducted disturbances, induced by radio-frequency fields		А	PASS	
EN 61000-4-8:2010 Power frequency magnetic field immunity		Α	PASS	
EN 61000-4-11:2004 Voltage dips, short interruptions and voltage variations immunity		B/C/C	PASS	NOTE (5)





#### NOTE:

- (1) "N/A" denotes test is not applicable to this device.
- (2) The EUT's max operating frequency is 600 MHz which does exceed 108 MHz, so the test will be performed.
- (3) If the power consumption is less than 75W, there is no limit applied.
- (4) Performance Criterion C for signal ports and telecommunication ports. Performance Criterion B for input d.c. power port and a.c. power ports.
- (5) Voltage Dips: >95% reduction Performance Criterion B Voltage Dips: 30% reduction – Performance Criterion C Voltage Interruptions: >95% reduction – Performance Criterion C
- (6) If the EUT has FM function the test will be performed.
- (7) If the EUT has AC power mains port the test will be performed.

(8)

Cable Type	Number of pairs	Measurement type	Procedures
Balanced Unscreened	1 (2 wire) ;2 (4 wire); 3 (6 wire) ;4 (8 wire)	Voltage	AAN
Balanced Unscreened	See a)	Voltage and Current	CP+CVP
Screened or Coaxial	n/a	Voltage	AAN
Screened or Coaxial	n/a	Voltage or Current	CP or CVP
Unbalanced cables	n/a	Voltage and Current	CP+CVP

Ports connected to cables with more than 4 balanced pairs or where the port is unable to function correctly when connected through an AAN.

- (9) If the EUT has tuner port the test will be performed.
- (10) The requirement followed by the client's specification.

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#### 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

#### 2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2, The BTL measurement uncertainty is less than the CISPR 16-4-2 U<sub>cispr</sub> requirement.

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

# A. Radiated emissions up to 1 GHz measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
		30MHz ~ 200MHz	V	4.54
DG-CB08	CISPR	30MHz ~ 200MHz	Н	3.98
(10m)	CIOPK	200MHz ~ 1,000MHz	V	3.98
		200MHz ~ 1,000MHz	Н	3.76

#### B. Radiated emissions above 1 GHz measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-CB08	CISPR -	1 ~ 6 GHz	4.02
(3m)		6 ~18 GHz	5.10

## C. Conducted emissions AC mains power port measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C01	CISPR	150 kHz ~ 30MHz	3.16

# D. Harmonic current emissions / Voltage changes, voltage fluctuations and flicker measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C01	EN 61000-3-2	Voltage	0.774
DG-C01	EN 61000-3-3	Current	0.782

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# E. Immunity Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)	
		Rise time tr	14.60 %	
DG-SR02	EN 61000-4-2	Peak current lp	1.72 %	
DG-3R02	EN 01000-4-2	Current at 30 ns	2.0 %	
		Current at 60 ns	1.84 %	
		80 MHz~1 GHz	2.175 dB	
		Electrical measurements	2.267 dB	
DG-CB05	EN 61000-4-3	Measuring the demodulation on analogue wired network lines	2.267 dB	
DG-CB03	EN 01000-4-3	Audio breakthrough measurement, test set-up for RS 2G/3G	2.349 dB	
		Audio breakthrough measurement, test set-up for RS 4G	2.413 dB	
		Voltage rise time (tr)	10.40 %	
DG-SR05	EN 61000-4-4	Voltage peak value(V <sub>P</sub> )	8.20 %	
		Voltage pulse width(tw)	6.0 %	
		Voltage front time (T <sub>fv</sub> )	5.80 %	
DG-SR05	EN 61000-4-5	Voltage peak value(V <sub>P</sub> )	3.90 %	
		Voltage duration(t <sub>d</sub> )	0.60 %	
		CDN	3.25 dB	
		EM clamp	4.410 dB	
DG-CB06	EN 61000-4-6			3.258 dB
		measuring the demodulation on analogue wired network lines	3.258 dB	
DG-SR05	EN 61000-4-8	Magnetic Field Level	3.787 %	
DG-SR05	EN 61000-4-11	0-4-11 voltage fall time (T <sub>f</sub> )		

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.





# 3. GENERAL INFORMATION

## 3.1 GENERAL DESCRIPTION OF EUT

Equipment	LCD Monitor		
Brand Name	N/A		
Test Model	**27G2******(*=A-Z,a-z,0-9,/, +,-,\ or blank)		
Series Model	N/A		
Model Difference(s)	Only differ in model name due to marketing purpose		
Power Source	AC Mains.		
Power Rating	100-240V~ 50-60Hz		
Connecting I/O Port(s)	1* AC port 1* D-SUB port 2* HDMI port 1* DP port 1* Earphone port		

Cable Type	Shielded Type	Ferrite Core	Length(m)	Note
D-SUB	Shielded	YES	1.8/1.5	Bonded two Ferrite Cores
HDMI	Shielded	NO	1.8/1.5	
DP	Shielded	NO	1.8/1.5	
AC Power Cord	Non-shielded	NO	1.8/1.5	

#### Note

- 1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- 2. Power cable 1.8m, 1.5m length, worst case is Power cable 1.8m with D-SUB+HDMI+DP 1.8m length testing and recording in test report.





#### 3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description		
Mode 1	D-SUB 1920*1080/60Hz		
Mode 2	DP1920*1080/144Hz		
Mode 3	HDMI 1 1920*1080/144Hz		
Mode 4	HDMI 2 2560*1440/144Hz		
Mode 5	HDMI 1 1080P		
Mode 6	HDMI 2 1080P		
Mode 7	HDMI 1 1024*768/60Hz		
Mode 8	HDMI 1 640*480/60Hz		

For Radiated Test				
Final Test Mode Description				
Mode 1	D-SUB 1920*1080/60Hz			
Mode 3	HDMI 1 1920*1080/144Hz			
Mode 5	HDMI 1 1080P			

For Conducted Test				
Final Test Mode Description				
Mode 1	D-SUB 1920*1080/60Hz			
Mode 3	HDMI 1 1920*1080/144Hz			
Mode 5	HDMI 1 1080P			

For Harmonics / Flicks Test			
Final Test Mode Description			
Mode 3	HDMI 1 1920*1080/144Hz		

For EMS Test				
Final Test Mode Description				
Mode 3	HDMI 1 1920*1080/144Hz			

## Evaluation description:

- 1. The maximum resolution is evaluated Mode 1-6. The worst case is Mode 3 and evaluated the middle and low resolution Mode 7 and mode 8.
- 2. According to the client's requirement, choose Mode 1, Mode 3, Mode 5 and recorded in test report.

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## 3.3 EUT OPERATING CONDITIONS

The EUT exercise program used during radiated and/or conducted emission measurement was designed to exercise the various system components in a manner similar to a typical use. The standard test signals and output signal as following:

- 1. EUT connected to Earphone via Earphone cable.
- 2. EUT connected to PC via D-SUB & HDMI & DP cable.
- 3. PC connected to Mouse and Keyboard via USB cable.

## 3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

100-240V AC
1
(EUT)

Graphics
Card (A)

7
(D)Mouse
6
(C) Keyboard

8

Earphone
(E)

Ferrite Core

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# 3.5 DESCRIPTION OF SUPPORT UNITS

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

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.
Α	Graphics Card	LEADTEK	LR2A5F	ALF7100123952
В	PC	DELL	Vostro 470	28747261333
С	Keyboard	DELL	KB212-B	CN0HTXH97158125004DXA01
D	Mouse	Lenovo	M-SBF96	8B4643223001509
Е	Earphone	Apple	N/A	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	AC Cable	NO	NO	1.8m/1.5m
2	D-SUB Cable	YES	YES	1.8m/1.5m
3	DP Cable	YES	NO	1.8m/1.5m
4	HDMI Cable	YES	NO	1.8m/1.5m
5	HDMI Cable	YES	NO	1.8m/1.5m
6	USB Cable	YES	NO	1.8m
7	USB Cable	YES	NO	1.8m
8	Earphone Cable	NO	NO	1.2m

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# 4. EMC EMISSION TEST- EN55032:2012+AC:2013 & 2015

## 4.1 RADIATED EMISSION

#### **4.1.1 LIMITS**

Class A equipment up to 1000MHz

Table	Frequency	Mea	asurement	Class A limit dB(uV/m)
clause	MHz	Distance m	Detector type/bandwidth	OATS/SAC
A2.1	30-230 230-1000	10	Quasi peak /	40 47
A2.2	30-230 230-1000	3	120 kHz	50 57

Class A equipment above 1000MHz

Table	Frequency	Mea	asurement	Class A limit dB(uV/m)
clause	MHz	Distance m	Detector type/bandwidth	FSOATS
10.4	1000-3000		Average /	56
A3.1	3000-6000	3	1 MHz	60
	1000-3000	3	Peak /	76
A3.2	3000-6000		1 MHz	80

Class B equipment up to 1000MHz

Table	Frequency	Mea	asurement	Class B limit dB(uV/m)
clause	MHz	Distance m	Detector type/bandwidth	OATS/SAC
	30-230	10		30
A4.1	230-1000	10	Quasi peak /	37
	30-230	3	120 kHz	40
A4.2	230-1000	3		47

Class B equipment above 1000MHz

Table	Frequency	Mea	asurement	Class B limit dB(uV/m)
clause	MHz	Distance m	Detector type/bandwidth	FSOATS
	1000-3000		Average /	50
A5.1	3000-6000	3	1 MHz	54
	1000-3000	3	Peak /	70
A5.2	3000-6000		1 MHz	74





#### Notes:

- (1) The limit for radiated test was performed according to as following: EN 55032
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) The test result calculated as following: Measurement Value = Reading Level + Correct Factor Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use) Margin Level = Measurement Value - Limit Value

Required highest frequency for radiated measurement

Highest internal frequency (F <sub>x</sub> )	Highest measured frequency			
MHz	MHz			
F <sub>x</sub> ≦108	1000			
108 <f<sub>x ≤500</f<sub>	2000			
500 < F <sub>x</sub> ≤ 1000	5000			
$F_{x} > 000$	5 <sup>th</sup> up to a maximum 6 GHz,			

Note for FM and TV broadcast receiver, F<sub>x</sub> is determined from the highest frequency generated or used excluding the local oscillator and tuned frequencies.

#### 4.1.2 MEASUREMENT INSTRUMENTS LIST

## Up to 1GHz:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Receiver	Keysight	N9038A	MY54450004	Aug. 11, 2019
2	MXE EMI Receiver	Agilent	N9038A	MY53220133	Mar. 10, 2020
3	Pre-Amplifier	EMC INSTRUMENT	EMC 9135	980284	Mar. 10, 2020
4	Pre-Amplifier	EMC INSTRUMENT	EMC 9135	980283	Mar. 10, 2020
5	Trilog-Broadband Antenna	Schwarzbeck	VULB9168	946	Nov. 24, 2019
6	Trilog-Broadband Antenna	Schwarzbeck	VULB9168	947	Nov. 24, 2019
7	Cable	emci	LMR-400(5m+ 11m+15m)	N/A	Aug. 07, 2019
8	Cable	emci	LMR-400(5m+ 8m+8m)	N/A	Aug. 07, 2019
9	Measurement Software	Farad	EZ-EMC Ver.BTL-2ANT- 1	N/A	N/A
10	Multi-Device Controller	ETS-Lindgren	2090	N/A	N/A
11	Attenuator	EMCI	EMCI-N-6-06	N0670	Nov. 24, 2019
12	Attenuator	EMCI	EMCI-N-6-06	N0671	Nov. 24, 2019

Remark: "N/A" denotes no model no., no serial no. or no calibration specified. All calibration period of equipment list is one year.

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#### Above 1GHz:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Horn Antenna	EMCO	3115	9605-4803	Mar. 23, 2020
2	Amplifier	Agilent	8449B	3008A02584	Aug. 11, 2019
3	MXE EMI Receiver	Agilent	N9038A	MY53220133	Mar. 10, 2020
4	Measurement Software	Farad	EZ-EMC Ver.BTL-2AN T-1	N/A	N/A
5	Multi-Device Controller	ETS-Lindgren	2090	N/A	N/A
6	Controller	MF	MF-7802	MF780208159	N/A
7	Cable	Micable Inc.	B10-01-01-5 M	18047123	Mar. 01, 2020
8	Cable	MIcable Inc. B10-01-01-10 M		18072746	Mar. 01, 2020
9	Cable	Cable N/A		18041824	Mar. 01, 2020

Remark: "N/A" denotes no model no., no serial no. or no calibration specified. All calibration period of equipment list is one year.

#### 4.1.3 TEST PROCEDURE

- a. The measuring distance of 10 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. (below 1GHz).
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation (above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- f. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1GHz)
- g. For the actual test configuration, please refer to the related Item Block Diagram of system tested (please refer to 3.4).

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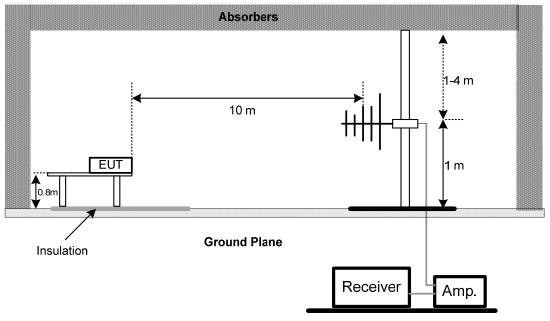


## 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

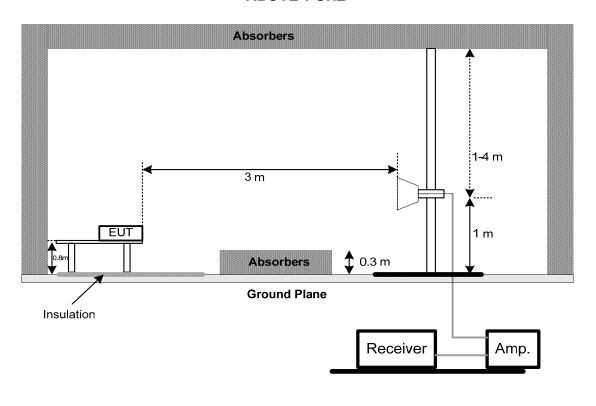
# 4.1.5 TEST SETUP

**UP TO 1 GHZ** 



Note: The antenna can be moved between 1 to 4 meters above the ground.

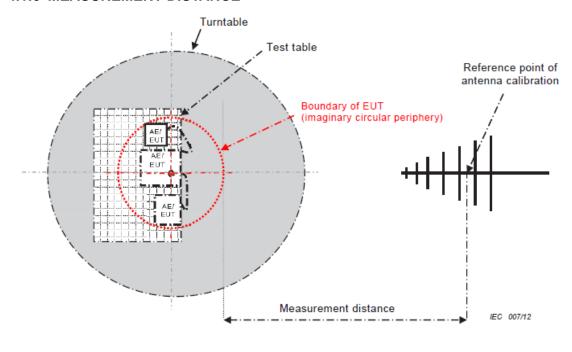
**ABOVE 1 GHZ** 







# 4.1.6 MEASUREMENT DISTANCE



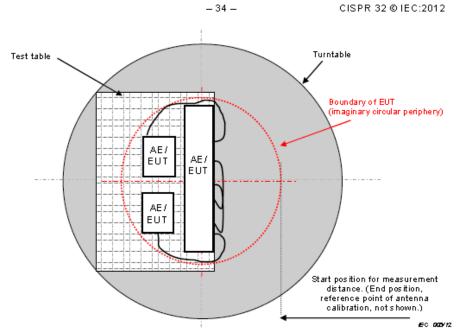


Figure C.2 - Boundary of EUT, Local AE and associated cabling

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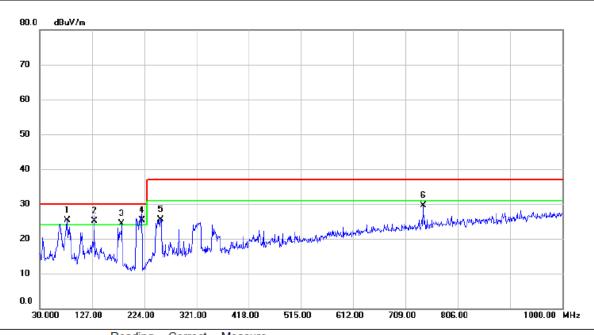
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# 4.1.7 TEST RESULTS (UP TO 1 GHZ)

EUT	LCD Monitor	Model Name	**27G2*****				
Temperature	25°C	60%					
Test Voltage	AC 230V/50Hz	Polarization	Vertical				
Test Mode	D-SUB 1920*1080/60Hz 1.8	D-SUB 1920*1080/60Hz 1.8m					
Test Engineer	Jivey Jiang						



	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	İ	80.4400	46.62	-21.34	25.28	30.00	-4.72	QP	
_	2	İ	131.3650	42.67	-17.49	25.18	30.00	-4.82	QP	
_	3	İ	182.2900	41.87	-17.55	24.32	30.00	-5.68	QP	
	4	*	219.1500	44.38	-19.08	25.30	30.00	-4.70	QP	
_	5		254.5550	42.39	-16.85	25.54	37.00	-11.46	QP	
_	6		741.9800	35.92	-6.35	29.57	37.00	-7.43	QP	
_										

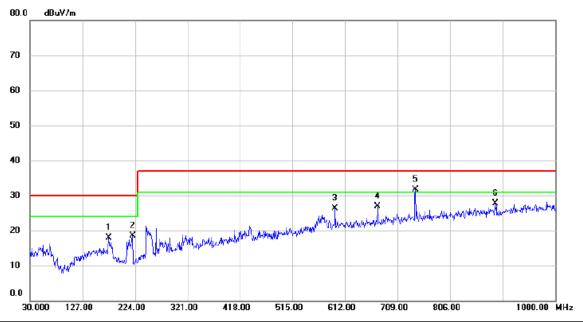
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EUT	LCD Monitor	Model Name	**27G2*****				
Temperature	25°C	Relative Humidity	60%				
Test Voltage	AC 230V/50Hz	Polarization	Horizontal				
Test Mode	D-SUB 1920*1080/60Hz 1.8	D-SUB 1920*1080/60Hz 1.8m					
Test Engineer	Jivey Jiang						



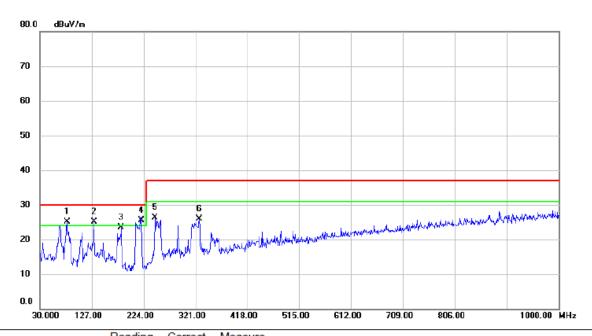
	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
-	1		175.5000	34.72	-16.86	17.86	30.00	-12.14	QP	
-	2		219.1500	37.86	-19.38	18.48	30.00	-11.52	QP	
-	3		593.5700	35.11	-8.73	26.38	37.00	-10.62	QP	
-	4		672.1400	34.49	-7.61	26.88	37.00	-10.12	QP	
-	5	*	741.9800	38.08	-6.46	31.62	37.00	-5.38	QP	
-	6		889.4200	32.75	-5.01	27.74	37.00	-9.26	QP	

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EUT	LCD Monitor	Model Name	**27G2*****				
Temperature	25°C	Relative Humidity	60%				
Test Voltage	AC 230V/50Hz	Polarization	Vertical				
Test Mode	HDMI 1 1920*1080/144Hz 1	HDMI 1 1920*1080/144Hz 1.8m					
Test Engineer	Jivey Jiang						



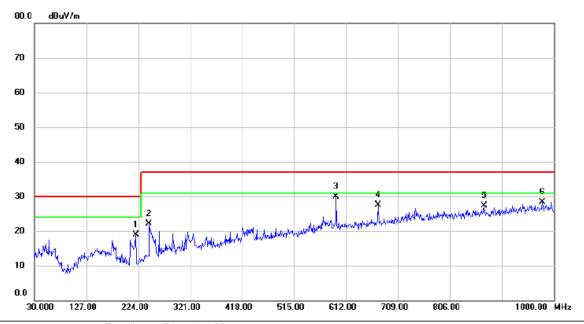
	No.	Mk.	Freq.	Reading Level	Factor	Measure- ment	Limit	Margin		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1	İ	80.9250	46.49	-21.41	25.08	30.00	-4.92	QP	
-	2	į ʻ	131.3650	42.54	-17.49	25.05	30.00	-4.95	QP	
-	3		182.2900	41.11	-17.55	23.56	30.00	-6.44	QP	
_	4	* 2	219.1500	44.60	-19.08	25.52	30.00	-4.48	QP	
-	5	2	244.8550	43.39	-17.18	26.21	37.00	-10.79	QP	
_	6	;	328.2750	40.11	-14.29	25.82	37.00	-11.18	QP	
_										

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EUT	LCD Monitor	Model Name	**27G2*****				
Temperature	25°C	Relative Humidity	60%				
Test Voltage	AC 230V/50Hz Polarization Horizontal						
Test Mode	HDMI 1 1920*1080/144Hz 1	HDMI 1 1920*1080/144Hz 1.8m					
Test Engineer	Jivey Jiang						



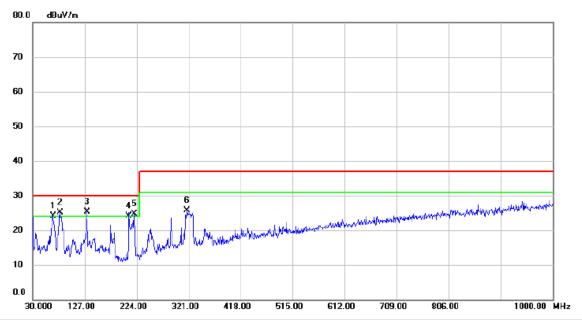
	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1	- :	219.1500	38.24	-19.38	18.86	30.00	-11.14	QP	
_	2		244.3700	39.35	-17.23	22.12	37.00	-14.88	QP	
_	3	*	593.5700	38.61	-8.73	29.88	37.00	-7.12	QP	
_	4	(	672.1400	35.09	-7.61	27.48	37.00	-9.52	QP	
	5		870.5050	32.48	-5.21	27.27	37.00	-9.73	QP	
	6	(	978.6600	31.89	-3.56	28.33	37.00	-8.67	QP	
_										

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EUT	LCD Monitor	Model Name	**27G2*****
Temperature	25°C	Relative Humidity	60%
Test Voltage	AC 230V/50Hz	Polarization	Vertical
Test Mode	HDMI 1 1080P 1.8m		
Test Engineer	Jivey Jiang		



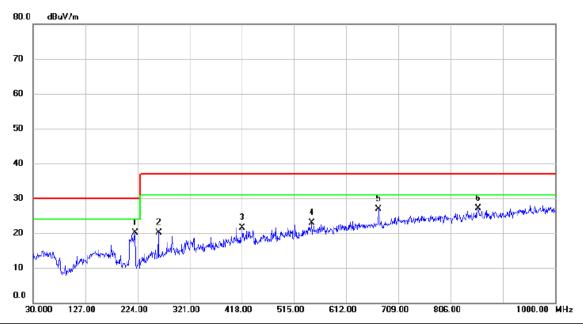
No.	M	c. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	ļ	67.8300	42.52	-18.33	24.19	30.00	-5.81	QP	
2	ļ	80.9250	46.53	-21.41	25.12	30.00	-4.88	QP	
3	*	131.3650	42.73	-17.49	25.24	30.00	-4.76	QP	
4	İ	209.4500	43.17	-19.10	24.07	30.00	-5.93	QP	
5	İ	219.6350	43.82	-19.08	24.74	30.00	-5.26	QP	
6		317.6050	40.28	-14.48	25.80	37.00	-11.20	QP	

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EUT	LCD Monitor	Model Name	**27G2*****			
Temperature	25°C	Relative Humidity	60%			
Test Voltage	AC 230V/50Hz	Polarization	Horizontal			
Test Mode	HDMI 1 1080P 1.8m	HDMI 1 1080P 1.8m				
Test Engineer	Jivey Jiang					



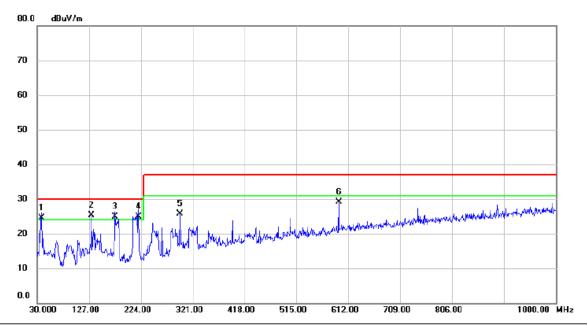
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		219.1500	39.46	-19.38	20.08	30.00	-9.92	QP	
2		262.8000	36.87	-16.67	20.20	37.00	-16.80	QP	
3		418.9700	33.99	-12.49	21.50	37.00	-15.50	QP	
4		547.9800	32.96	-10.08	22.88	37.00	-14.12	QP	
5		672.1400	34.44	-7.61	26.83	37.00	-10.17	QP	
6	*	857.4100	32.45	-5.34	27.11	37.00	-9.89	QP	

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EUT	LCD Monitor	Model Name	**27G2******				
Temperature	25°C	Relative Humidity	60%				
Test Voltage	AC 110V/60Hz	Vertical					
Test Mode	HDMI 1 1920*1080/144Hz 1.8m						
Test Engineer	Jivey Jiang						



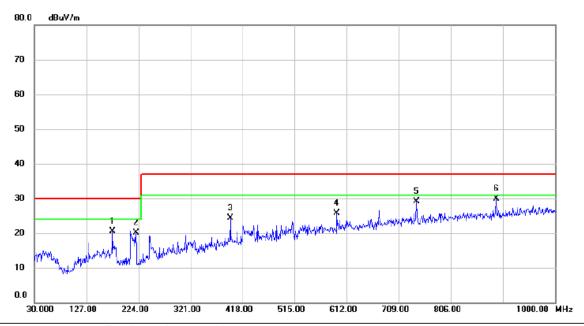
	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	İ	37.7600	42.25	-17.72	24.53	30.00	-5.47	QP	
-	2	*	131.3650	42.78	-17.49	25.29	30.00	-4.71	QP	
Ī	3	İ	175.5000	41.72	-16.82	24.90	30.00	-5.10	QP	
Ī	4	ļ	219.6350	44.07	-19.08	24.99	30.00	-5.01	QP	
	5		297.2350	40.87	-15.19	25.68	37.00	-11.32	QP	
_	6		594.0550	37.66	-8.63	29.03	37.00	-7.97	QP	

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EUT	LCD Monitor	Model Name	**27G2*****				
Temperature	25°C	Relative Humidity	60%				
Test Voltage	AC 110V/60Hz	Horizontal					
Test Mode	HDMI 1 1920*1080/144Hz 1.8m						
Test Engineer	Jivey Jiang						



1	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		175.5000	37.46	-16.86	20.60	30.00	-9.40	QP	
	2		219.1500	39.39	-19.38	20.01	30.00	-9.99	QP	
	3		394.7200	37.38	-13.04	24.34	37.00	-12.66	QP	
	4		593.5700	34.47	-8.73	25.74	37.00	-11.26	QP	
	5		741.9800	35.59	-6.46	29.13	37.00	-7.87	QP	
	6	*	890.3900	34.97	-5.00	29.97	37.00	-7.03	QP	

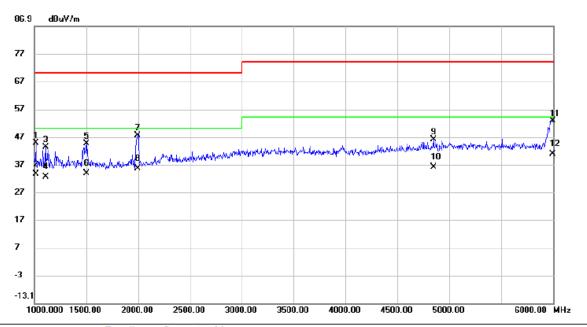
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# 4.1.8 TEST RESULTS (ABOVE 1 GHZ)

EUT	LCD Monitor	Model Name	**27G2*****					
Temperature	25°C	Relative Humidity	60%					
Test Voltage	AC 230V/50Hz	Polarization	Vertical					
Test Mode	D-SUB 1920*1080/60Hz 1.8m							
Test Engineer	Jivey Jiang							

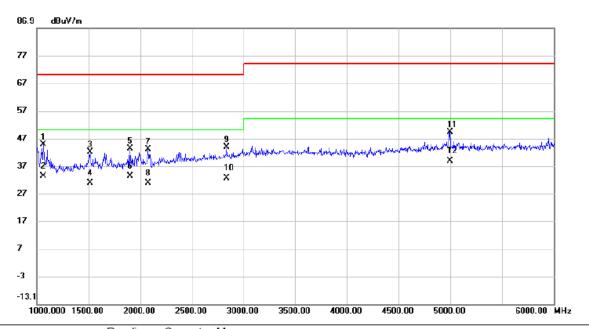


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1017.500	50.86	-6.18	44.68	70.00	-25.32	peak	
2		1017.500	39.82	-6.18	33.64	50.00	-16.36	AVG	
3		1107.500	48.84	-5.68	43.16	70.00	-26.84	peak	
4		1107.500	38.20	-5.68	32.52	50.00	-17.48	AVG	
5		1500.000	48.10	-3.48	44.62	70.00	-25.38	peak	
6		1500.000	37.16	-3.48	33.68	50.00	-16.32	AVG	
7		1995.000	49.29	-1.77	47.52	70.00	-22.48	peak	
8		1995.000	37.36	-1.77	35.59	50.00	-14.41	AVG	
9		4847.500	38.68	7.44	46.12	74.00	-27.88	peak	
10		4847.500	28.48	7.44	35.92	54.00	-18.08	AVG	
11	;	5995.000	43.95	8.88	52.83	74.00	-21.17	peak	
12	*	5995.000	31.94	8.88	40.82	54.00	-13.18	AVG	





EUT	LCD Monitor	Model Name	**27G2*****				
Temperature	emperature 25°C		60%				
Test Voltage	AC 230V/50Hz	Horizontal					
Test Mode	D-SUB 1920*1080/60Hz 1.8m						
Test Engineer	Jivey Jiang						



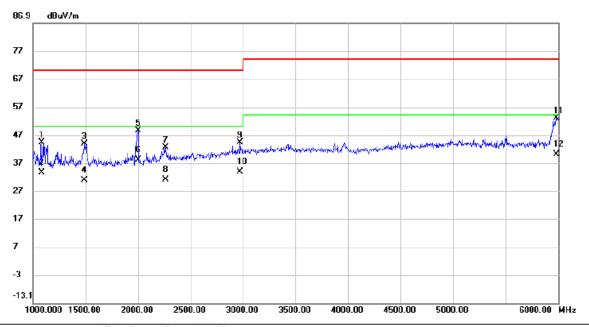
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∀	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1062.500	50.83	-5.93	44.90	70.00	-25.10	peak	
2		1062.500	39.31	-5.93	33.38	50.00	-16.62	AVG	
3		1515.000	45.39	-3.42	41.97	70.00	-28.03	peak	
4		1515.000	34.16	-3.42	30.74	50.00	-19.26	AVG	
5		1905.000	45.29	-2.08	43.21	70.00	-26.79	peak	
6		1905.000	35.31	-2.08	33.23	50.00	-16.77	AVG	
7		2075.000	44.38	-1.41	42.97	70.00	-27.03	peak	
8		2075.000	32.26	-1.41	30.85	50.00	-19.15	AVG	
9		2835.000	41.48	2.22	43.70	70.00	-26.30	peak	
10		2835.000	30.41	2.22	32.63	50.00	-17.37	AVG	
11		4995.000	41.41	7.95	49.36	74.00	-24.64	peak	
12	*	4995.000	30.86	7.95	38.81	54.00	-15.19	AVG	

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EUT	T LCD Monitor		**27G2*****				
Temperature	25°C	Relative Humidity	60%				
Test Voltage	AC 230V/50Hz	Polarization	Vertical				
Test Mode	HDMI 1 1920*1080/144Hz 1.8m						
Test Engineer	Jivey Jiang						



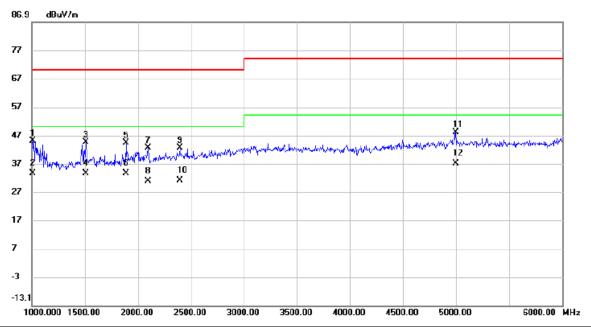
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1082.500	50.07	-5.82	44.25	70.00	-25.75	peak	
2		1082.500	39.47	-5.82	33.65	50.00	-16.35	AVG	
3		1487.500	47.34	-3.55	43.79	70.00	-26.21	peak	
4		1487.500	34.44	-3.55	30.89	50.00	-19.11	AVG	
5		2000.000	50.21	-1.75	48.46	70.00	-21.54	peak	
6	*	2000.000	39.67	-1.75	37.92	50.00	-12.08	AVG	
7		2265.000	43.19	-0.55	42.64	70.00	-27.36	peak	
8		2265.000	31.49	-0.55	30.94	50.00	-19.06	AVG	
9		2970.000	41.34	2.91	44.25	70.00	-25.75	peak	
10		2970.000	30.82	2.91	33.73	50.00	-16.27	AVG	
11		5982.500	44.16	8.87	53.03	74.00	-20.97	peak	
12		5982.500	31.27	8.87	40.14	54.00	-13.86	AVG	

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EUT	JT LCD Monitor		**27G2*****				
Temperature	25°C	Relative Humidity	60%				
Test Voltage	AC 230V/50Hz	Polarization	Horizontal				
Test Mode	HDMI 1 1920*1080/144Hz 1.8m						
Test Engineer	Jivey Jiang						



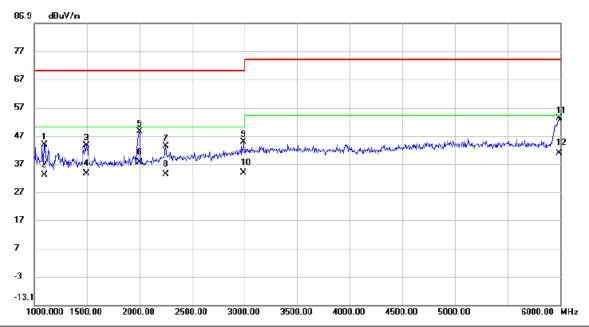
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1007.500	51.18	-6.24	44.94	70.00	-25.06	peak	
2	*	1007.500	39.89	-6.24	33.65	50.00	-16.35	AVG	
3		1510.000	47.89	-3.45	44.44	70.00	-25.56	peak	
4		1510.000	36.88	-3.45	33.43	50.00	-16.57	AVG	
5		1887.500	46.35	-2.14	44.21	70.00	-25.79	peak	
6		1887.500	35.66	-2.14	33.52	50.00	-16.48	AVG	
7		2095.000	43.81	-1.31	42.50	70.00	-27.50	peak	
8		2095.000	32.08	-1.31	30.77	50.00	-19.23	AVG	
9		2395.000	42.44	0.05	42.49	70.00	-27.51	peak	
10		2395.000	30.90	0.05	30.95	50.00	-19.05	AVG	
11		4995.000	40.18	7.95	48.13	74.00	-25.87	peak	
12		4995.000	28.98	7.95	36.93	54.00	-17.07	AVG	

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EUT	LCD Monitor	Model Name	**27G2*****
Temperature	25°C	Relative Humidity	60%
Test Voltage	AC 230V/50Hz	Polarization	Vertical
Test Mode	HDMI 1 1080P 1.8m		
Test Engineer	Jivey Jiang		



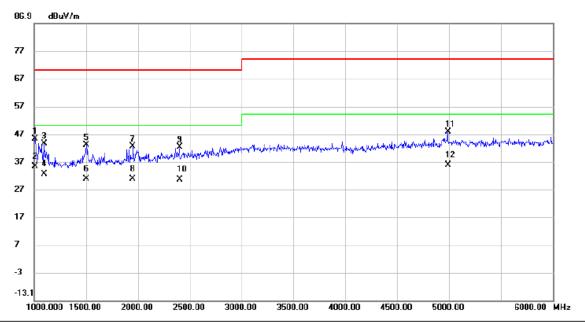
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	1	1097.500	49.56	-5.73	43.83	70.00	-26.17	peak	
2	1	1097.500	38.85	-5.73	33.12	50.00	-16.88	AVG	
3	1	1497.500	46.96	-3.49	43.47	70.00	-26.53	peak	
4	1	1497.500	37.13	-3.49	33.64	50.00	-16.36	AVG	
5	2	2000.000	50.38	-1.75	48.63	70.00	-21.37	peak	
6	* 2	2000.000	39.37	-1.75	37.62	50.00	-12.38	AVG	
7	2	2250.000	43.90	-0.61	43.29	70.00	-26.71	peak	
8	2	2250.000	33.90	-0.61	33.29	50.00	-16.71	AVG	
9	2	2992.500	41.70	3.02	44.72	70.00	-25.28	peak	
10	2	2992.500	30.76	3.02	33.78	50.00	-16.22	AVG	
11	5	5990.000	44.38	8.87	53.25	74.00	-20.75	peak	
12	5	5990.000	31.85	8.87	40.72	54.00	-13.28	AVG	

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EUT	LCD Monitor	Model Name	**27G2*****
Temperature	25°C	Relative Humidity	60%
Test Voltage	AC 230V/50Hz	Polarization	Horizontal
Test Mode	HDMI 1 1080P 1.8m		
Test Engineer	Jivey Jiang		



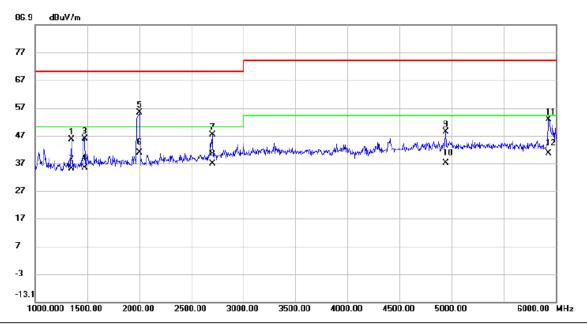
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1007.500	51.41	-6.24	45.17	70.00	-24.83	peak	
2	*	1007.500	41.61	-6.24	35.37	50.00	-14.63	AVG	
3		1097.500	49.31	-5.73	43.58	70.00	-26.42	peak	
4		1097.500	38.29	-5.73	32.56	50.00	-17.44	AVG	
5		1500.000	46.44	-3.48	42.96	70.00	-27.04	peak	
6		1500.000	34.38	-3.48	30.90	50.00	-19.10	AVG	
7		1950.000	44.34	-1.92	42.42	70.00	-27.58	peak	
8		1950.000	32.76	-1.92	30.84	50.00	-19.16	AVG	
9	- 2	2400.000	42.30	0.07	42.37	70.00	-27.63	peak	
10	2	2400.000	30.49	0.07	30.56	50.00	-19.44	AVG	
11	4	4987.500	39.76	7.94	47.70	74.00	-26.30	peak	
12	4	4987.500	27.85	7.94	35.79	54.00	-18.21	AVG	

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EUT	JT LCD Monitor		**27G2******				
Temperature	25°C	Relative Humidity	60%				
Test Voltage	AC 110V/60Hz	Polarization	Vertical				
Test Mode	HDMI 1 1920*1080/144Hz 1.8m						
Test Engineer	Jivey Jiang						

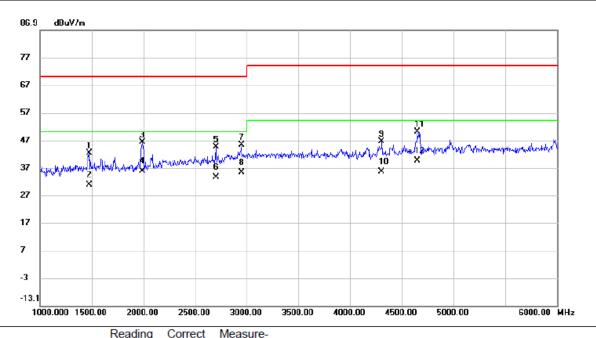


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1352.500	49.86	-4.31	45.55	70.00	-24.45	peak	
2		1352.500	39.45	-4.31	35.14	50.00	-14.86	AVG	
3		1475.000	49.40	-3.62	45.78	70.00	-24.22	peak	
4		1475.000	38.85	-3.62	35.23	50.00	-14.77	AVG	
5		2000.000	56.98	-1.75	55.23	70.00	-14.77	peak	
6	*	2000.000	42.45	-1.75	40.70	50.00	-9.30	AVG	
7		2700.000	45.73	1.54	47.27	70.00	-22.73	peak	
8		2700.000	35.12	1.54	36.66	50.00	-13.34	AVG	
9		4940.000	40.51	7.76	48.27	74.00	-25.73	peak	
10		4940.000	29.16	7.76	36.92	54.00	-17.08	AVG	
11		5927.500	43.94	8.82	52.76	74.00	-21.24	peak	
12		5927.500	31.74	8.82	40.56	54.00	-13.44	AVG	





EUT	LCD Monitor		**27G2*****				
Temperature	25°C	Relative Humidity	60%				
Test Voltage	AC 110V/60Hz	Polarization	Horizontal				
Test Mode	HDMI 1 1920*1080/144Hz 1.8m						
Test Engineer	Jivey Jiang						



No.	Mk	. Freq.	Level	Factor	ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1475.000	45.80	-3.62	42.18	70.00	-27.82	peak	
2		1475.000	34.48	-3.62	30.86	50.00	-19.14	AVG	
3		1987.500	48.08	-1.80	46.28	70.00	-23.72	peak	
4	*	1987.500	37.54	-1.80	35.74	50.00	-14.26	AVG	
5		2700.000	42.96	1.54	44.50	70.00	-25.50	peak	
6		2700.000	32.08	1.54	33.62	50.00	-16.38	AVG	
7		2947.500	42.53	2.79	45.32	70.00	-24.68	peak	
8		2947.500	32.49	2.79	35.28	50.00	-14.72	AVG	
9		4305.000	40.75	5.74	46.49	74.00	-27.51	peak	
10		4305.000	29.84	5.74	35.58	54.00	-18.42	AVG	
11		4652.500	43.22	6.76	49.98	74.00	-24.02	peak	
12		4652.500	32.87	6.76	39.63	54.00	-14.37	AVG	

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### 4.2 CONDUCTED EMISSION MEASUREMENT AT AC MAINS POWER PORTS

### **4.2.1 LIMITS**

Requirements for conducted emissions from AC mains power ports of Class A equipment

Table clause	Frequency Range MHz	Coupling Device	Detector Type / bandwidth	Class A Limits (dB(μV) )
A8.1	0.15 - 0.5	AMN	Quasi Peak /	79
A0.1	0.5 - 30	AIVIIN	9 kHz	73
A8.2	0.15 - 0.5	AMN	Average /	66
A0.2	0.5 - 30		9 kHz	60

Requirements for conducted emissions from AC mains power ports of Class B equipment

Table clause	Frequency Range MHz	Coupling Device	Detector Type / bandwidth	Class B Limits (dB(μV) )
A9.1	0.15 - 0.5 0.5 - 5	AMNI Quasi Peak /		66-56 56
A3.1	5 - 30		9 kHz	60
	0.15 - 0.5			56-46
A9.2	0.5 - 5	AMN	Average / 9 kHz	46
	5 - 30		3 KIIZ	50

### NOTE:

(1) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)

Margin Level = Measurement Value - Limit Value

### **4.2.2 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100382	Mar. 10, 2020
2	Measurement Software	Farad	EZ-EMC Ver.NB-03A 1-01	N/A	N/A
3	Cable	N/A	RG223	12m	Mar. 12, 2020
4	LISN	EMCO	3816/2	00052765	Mar. 10, 2020
5	TWO-LINE V-NETWORK	R&S	ENV216	101447	May. 19, 2020
6	50Ω Terminator	SHX	TF5-3	15041305	Mar. 10, 2020

Remark: "N/A" denotes no model no., no serial no. or no calibration specified.

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<sup>&</sup>quot;\*" calibration period of equipment list is three year.





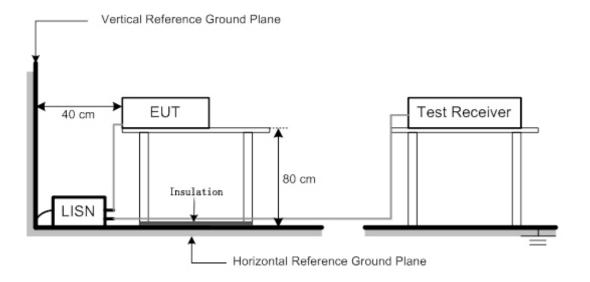
### 4.2.3 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

### 4.2.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.2.5 TEST SETUP

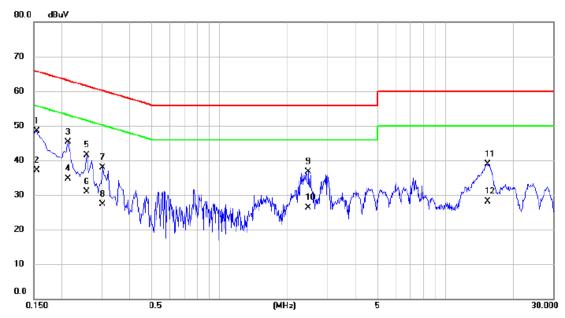






# **4.2.6 TEST RESULTS**

EUT	LCD Monitor Model Name **27G2******						
Temperature	25°C	Relative Humidity	53%				
Test Voltage	AC 230V/50Hz Phase Line						
Test Mode	D-SUB 1920*1080/60Hz 1.8m						
Test Engineer	Jivey Jiang						

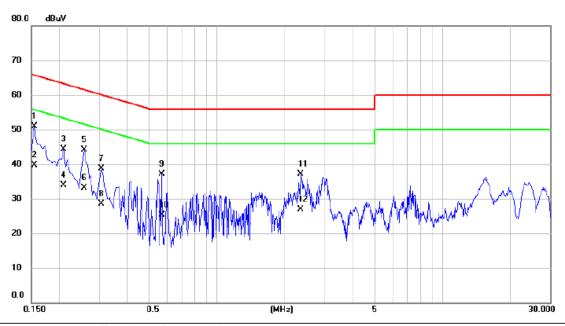


No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.1544	37.92	10.49	48.41	65.76	-17.35	QP	
2	0.1544	26.58	10.49	37.07	55.76	-18.69	AVG	
3	0.2130	34.74	10.47	45.21	63.09	-17.88	QP	
4	0.2130	24.16	10.47	34.63	53.09	-18.46	AVG	
5	0.2580	31.06	10.47	41.53	61.50	-19.97	QP	
6	0.2580	20.38	10.47	30.85	51.50	-20.65	AVG	
7	0.3030	27.32	10.49	37.81	60.16	-22.35	QP	
8	0.3030	16.85	10.49	27.34	50.16	-22.82	AVG	
9	2.4765	26.06	10.66	36.72	56.00	-19.28	QP	
10	2.4765	15.63	10.66	26.29	46.00	-19.71	AVG	
11	15.3645	27.84	10.99	38.83	60.00	-21.17	QP	
12	15.3645	17.21	10.99	28.20	50.00	-21.80	AVG	





EUT	LCD Monitor Model Name **27G2******						
Temperature	25°C	Relative Humidity	53%				
Test Voltage	AC 230V/50Hz Phase Neutral						
Test Mode	D-SUB 1920*1080/60Hz 1.8m						
Test Engineer	Jivey Jiang						

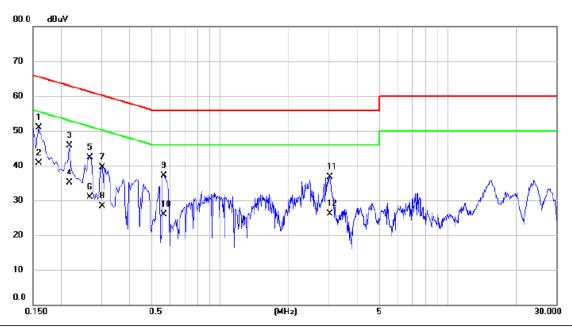


MHz         dBuV         dB         dBuV         dBuV         dB         Detector         Comment           1 * 0.1544 40.38 10.43 50.81 65.76 -14.95 QP         2 0.1544 29.35 10.43 39.78 55.76 -15.98 AVG         39.78 55.76 -15.98 AVG         30.2085 33.92 10.45 44.37 63.26 -18.89 QP         30.2085 23.52 10.45 33.97 53.26 -19.29 AVG         30.2085 23.52 10.45 33.97 53.26 -19.29 AVG         30.2580 22.67 10.47 33.14 51.50 -17.49 QP         30.2580 22.67 10.47 33.14 51.50 -18.36 AVG         30.2580 22.67 10.47 33.14 51.50 -18.36 AVG         30.3075 28.30 10.45 38.75 60.04 -21.29 QP         30.3075 18.10 10.45 28.55 50.04 -21.49 AVG         30.3075 18.10 10.45 28.55 50.04 -21.49 AVG         30.5684 26.62 10.49 37.11 56.00 -18.89 QP         30.5684 14.86 10.49 25.35 46.00 -20.65 AVG         37.04 56.00 -18.96 QP         37.04 56.00 -18.96 QP         37.04 56.00 -19.06 AVG         37.04 56.	No	. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
2 0.1544 29.35 10.43 39.78 55.76 -15.98 AVG 3 0.2085 33.92 10.45 44.37 63.26 -18.89 QP 4 0.2085 23.52 10.45 33.97 53.26 -19.29 AVG 5 0.2580 33.54 10.47 44.01 61.50 -17.49 QP 6 0.2580 22.67 10.47 33.14 51.50 -18.36 AVG 7 0.3075 28.30 10.45 38.75 60.04 -21.29 QP 8 0.3075 18.10 10.45 28.55 50.04 -21.49 AVG 9 0.5684 26.62 10.49 37.11 56.00 -18.89 QP 10 0.5684 14.86 10.49 25.35 46.00 -20.65 AVG 11 2.3550 26.42 10.62 37.04 56.00 -18.96 QP			MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
3     0.2085     33.92     10.45     44.37     63.26     -18.89     QP       4     0.2085     23.52     10.45     33.97     53.26     -19.29     AVG       5     0.2580     33.54     10.47     44.01     61.50     -17.49     QP       6     0.2580     22.67     10.47     33.14     51.50     -18.36     AVG       7     0.3075     28.30     10.45     38.75     60.04     -21.29     QP       8     0.3075     18.10     10.45     28.55     50.04     -21.49     AVG       9     0.5684     26.62     10.49     37.11     56.00     -18.89     QP       10     0.5684     14.86     10.49     25.35     46.00     -20.65     AVG       11     2.3550     26.42     10.62     37.04     56.00     -18.96     QP	1	*	0.1544	40.38	10.43	50.81	65.76	-14.95	QP	
4       0.2085       23.52       10.45       33.97       53.26       -19.29       AVG         5       0.2580       33.54       10.47       44.01       61.50       -17.49       QP         6       0.2580       22.67       10.47       33.14       51.50       -18.36       AVG         7       0.3075       28.30       10.45       38.75       60.04       -21.29       QP         8       0.3075       18.10       10.45       28.55       50.04       -21.49       AVG         9       0.5684       26.62       10.49       37.11       56.00       -18.89       QP         10       0.5684       14.86       10.49       25.35       46.00       -20.65       AVG         11       2.3550       26.42       10.62       37.04       56.00       -18.96       QP	2	!	0.1544	29.35	10.43	39.78	55.76	-15.98	AVG	
5       0.2580       33.54       10.47       44.01       61.50       -17.49       QP         6       0.2580       22.67       10.47       33.14       51.50       -18.36       AVG         7       0.3075       28.30       10.45       38.75       60.04       -21.29       QP         8       0.3075       18.10       10.45       28.55       50.04       -21.49       AVG         9       0.5684       26.62       10.49       37.11       56.00       -18.89       QP         10       0.5684       14.86       10.49       25.35       46.00       -20.65       AVG         11       2.3550       26.42       10.62       37.04       56.00       -18.96       QP	3	,	0.2085	33.92	10.45	44.37	63.26	-18.89	QP	
6 0.2580 22.67 10.47 33.14 51.50 -18.36 AVG 7 0.3075 28.30 10.45 38.75 60.04 -21.29 QP 8 0.3075 18.10 10.45 28.55 50.04 -21.49 AVG 9 0.5684 26.62 10.49 37.11 56.00 -18.89 QP 10 0.5684 14.86 10.49 25.35 46.00 -20.65 AVG 11 2.3550 26.42 10.62 37.04 56.00 -18.96 QP	4		0.2085	23.52	10.45	33.97	53.26	-19.29	AVG	
7     0.3075     28.30     10.45     38.75     60.04     -21.29     QP       8     0.3075     18.10     10.45     28.55     50.04     -21.49     AVG       9     0.5684     26.62     10.49     37.11     56.00     -18.89     QP       10     0.5684     14.86     10.49     25.35     46.00     -20.65     AVG       11     2.3550     26.42     10.62     37.04     56.00     -18.96     QP	5	•	0.2580	33.54	10.47	44.01	61.50	-17.49	QP	
8     0.3075     18.10     10.45     28.55     50.04     -21.49     AVG       9     0.5684     26.62     10.49     37.11     56.00     -18.89     QP       10     0.5684     14.86     10.49     25.35     46.00     -20.65     AVG       11     2.3550     26.42     10.62     37.04     56.00     -18.96     QP	6	i	0.2580	22.67	10.47	33.14	51.50	-18.36	AVG	
9 0.5684 26.62 10.49 37.11 56.00 -18.89 QP 10 0.5684 14.86 10.49 25.35 46.00 -20.65 AVG 11 2.3550 26.42 10.62 37.04 56.00 -18.96 QP	7	,	0.3075	28.30	10.45	38.75	60.04	-21.29	QP	
10 0.5684 14.86 10.49 25.35 46.00 -20.65 AVG 11 2.3550 26.42 10.62 37.04 56.00 -18.96 QP	8	1	0.3075	18.10	10.45	28.55	50.04	-21.49	AVG	
11 2.3550 26.42 10.62 37.04 56.00 -18.96 QP	9	)	0.5684	26.62	10.49	37.11	56.00	-18.89	QP	
	10	)	0.5684	14.86	10.49	25.35	46.00	-20.65	AVG	
12 2.3550 16.32 10.62 26.94 46.00 -19.06 AVG	11		2.3550	26.42	10.62	37.04	56.00	-18.96	QP	
	12	!	2.3550	16.32	10.62	26.94	46.00	-19.06	AVG	





EUT	LCD Monitor	**27G2*****					
Temperature	25°C	Relative Humidity	53%				
Test Voltage	AC 230V/50Hz Phase Line						
Test Mode	HDMI 1 1920*1080/144Hz 1.8m						
Test Engineer	Jivey Jiang						



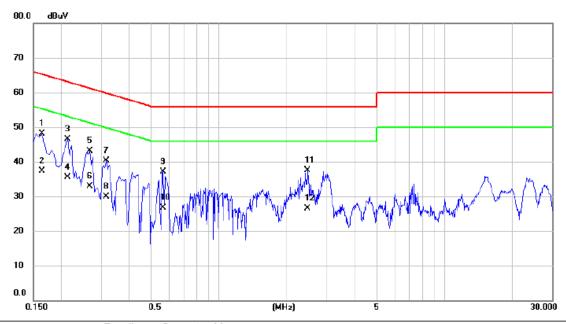
MHz         dBuV         dB         dBuV         dBuV         dB         Detector         Comment           1 * 0.1590 40.35         10.48 50.83 65.52 -14.69 QP         QP           2 0.1590 30.23 10.48 40.71 55.52 -14.81 AVG         3         0.2174 35.23 10.47 45.70 62.92 -17.22 QP           4 0.2174 24.65 10.47 35.12 52.92 -17.80 AVG         5         0.2670 31.77 10.48 42.25 61.21 -18.96 QP           6 0.2670 20.45 10.48 30.93 51.21 -20.28 AVG         7         0.3030 29.07 10.49 39.56 60.16 -20.60 QP           8 0.3030 17.86 10.49 28.35 50.16 -21.81 AVG         9         0.5640 26.65 10.52 37.17 56.00 -18.83 QP           10 0.5640 15.48 10.52 26.00 46.00 -20.00 AVG         11 3.0390 25.93 10.69 36.62 56.00 -19.38 QP           12 3.0390 15.36 10.69 26.05 46.00 -19.95 AVG	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
2       0.1590       30.23       10.48       40.71       55.52       -14.81       AVG         3       0.2174       35.23       10.47       45.70       62.92       -17.22       QP         4       0.2174       24.65       10.47       35.12       52.92       -17.80       AVG         5       0.2670       31.77       10.48       42.25       61.21       -18.96       QP         6       0.2670       20.45       10.48       30.93       51.21       -20.28       AVG         7       0.3030       29.07       10.49       39.56       60.16       -20.60       QP         8       0.3030       17.86       10.49       28.35       50.16       -21.81       AVG         9       0.5640       26.65       10.52       37.17       56.00       -18.83       QP         10       0.5640       15.48       10.52       26.00       46.00       -20.00       AVG         11       3.0390       25.93       10.69       36.62       56.00       -19.38       QP			MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
3 0.2174 35.23 10.47 45.70 62.92 -17.22 QP 4 0.2174 24.65 10.47 35.12 52.92 -17.80 AVG 5 0.2670 31.77 10.48 42.25 61.21 -18.96 QP 6 0.2670 20.45 10.48 30.93 51.21 -20.28 AVG 7 0.3030 29.07 10.49 39.56 60.16 -20.60 QP 8 0.3030 17.86 10.49 28.35 50.16 -21.81 AVG 9 0.5640 26.65 10.52 37.17 56.00 -18.83 QP 10 0.5640 15.48 10.52 26.00 46.00 -20.00 AVG 11 3.0390 25.93 10.69 36.62 56.00 -19.38 QP	1	*	0.1590	40.35	10.48	50.83	65.52	-14.69	QP	
4       0.2174       24.65       10.47       35.12       52.92       -17.80       AVG         5       0.2670       31.77       10.48       42.25       61.21       -18.96       QP         6       0.2670       20.45       10.48       30.93       51.21       -20.28       AVG         7       0.3030       29.07       10.49       39.56       60.16       -20.60       QP         8       0.3030       17.86       10.49       28.35       50.16       -21.81       AVG         9       0.5640       26.65       10.52       37.17       56.00       -18.83       QP         10       0.5640       15.48       10.52       26.00       46.00       -20.00       AVG         11       3.0390       25.93       10.69       36.62       56.00       -19.38       QP	2		0.1590	30.23	10.48	40.71	55.52	-14.81	AVG	
5     0.2670     31.77     10.48     42.25     61.21     -18.96     QP       6     0.2670     20.45     10.48     30.93     51.21     -20.28     AVG       7     0.3030     29.07     10.49     39.56     60.16     -20.60     QP       8     0.3030     17.86     10.49     28.35     50.16     -21.81     AVG       9     0.5640     26.65     10.52     37.17     56.00     -18.83     QP       10     0.5640     15.48     10.52     26.00     46.00     -20.00     AVG       11     3.0390     25.93     10.69     36.62     56.00     -19.38     QP	3		0.2174	35.23	10.47	45.70	62.92	-17.22	QP	
6 0.2670 20.45 10.48 30.93 51.21 -20.28 AVG 7 0.3030 29.07 10.49 39.56 60.16 -20.60 QP 8 0.3030 17.86 10.49 28.35 50.16 -21.81 AVG 9 0.5640 26.65 10.52 37.17 56.00 -18.83 QP 10 0.5640 15.48 10.52 26.00 46.00 -20.00 AVG 11 3.0390 25.93 10.69 36.62 56.00 -19.38 QP	4		0.2174	24.65	10.47	35.12	52.92	-17.80	AVG	
7 0.3030 29.07 10.49 39.56 60.16 -20.60 QP 8 0.3030 17.86 10.49 28.35 50.16 -21.81 AVG 9 0.5640 26.65 10.52 37.17 56.00 -18.83 QP 10 0.5640 15.48 10.52 26.00 46.00 -20.00 AVG 11 3.0390 25.93 10.69 36.62 56.00 -19.38 QP	5		0.2670	31.77	10.48	42.25	61.21	-18.96	QP	
8 0.3030 17.86 10.49 28.35 50.16 -21.81 AVG 9 0.5640 26.65 10.52 37.17 56.00 -18.83 QP 10 0.5640 15.48 10.52 26.00 46.00 -20.00 AVG 11 3.0390 25.93 10.69 36.62 56.00 -19.38 QP	6		0.2670	20.45	10.48	30.93	51.21	-20.28	AVG	
9 0.5640 26.65 10.52 37.17 56.00 -18.83 QP 10 0.5640 15.48 10.52 26.00 46.00 -20.00 AVG 11 3.0390 25.93 10.69 36.62 56.00 -19.38 QP	7		0.3030	29.07	10.49	39.56	60.16	-20.60	QP	
10 0.5640 15.48 10.52 26.00 46.00 -20.00 AVG 11 3.0390 25.93 10.69 36.62 56.00 -19.38 QP	8		0.3030	17.86	10.49	28.35	50.16	-21.81	AVG	
11 3.0390 25.93 10.69 36.62 56.00 -19.38 QP	9		0.5640	26.65	10.52	37.17	56.00	-18.83	QP	
	10		0.5640	15.48	10.52	26.00	46.00	-20.00	AVG	
12 3.0390 15.36 10.69 26.05 46.00 -19.95 AVG	11		3.0390	25.93	10.69	36.62	56.00	-19.38	QP	
	12		3.0390	15.36	10.69	26.05	46.00	-19.95	AVG	

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EUT	LCD Monitor Model Name **27G2******						
Temperature	25°C	Relative Humidity	53%				
Test Voltage	AC 230V/50Hz Phase Neutral						
Test Mode	HDMI 1 1920*1080/144Hz 1.8m						
Test Engineer	Jivey Jiang						



MHz         dBuV         dB         dBuV         dB uV         dB uV<	No	. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
2       0.1635       26.85       10.44       37.29       55.28       -17.99       AVG         3       *       0.2130       36.00       10.45       46.45       63.09       -16.64       QP         4       0.2130       25.13       10.45       35.58       53.09       -17.51       AVG         5       0.2670       32.73       10.46       43.19       61.21       -18.02       QP         6       0.2670       22.46       10.46       32.92       51.21       -18.29       AVG         7       0.3165       29.93       10.46       40.39       59.80       -19.41       QP         8       0.3165       19.42       10.46       29.88       49.80       -19.92       AVG         9       0.5640       26.71       10.49       37.20       56.00       -18.80       QP         10       0.5640       16.21       10.49       26.70       46.00       -19.30       AVG         11       2.4765       26.85       10.63       37.48       56.00       -18.52       QP			MHz	dBuV	dB	dBu∀	dBuV	dB	Detector	Comment
3 * 0.2130       36.00       10.45       46.45       63.09 -16.64 QP         4 0.2130       25.13       10.45       35.58       53.09 -17.51 AVG         5 0.2670       32.73       10.46       43.19 61.21 -18.02 QP         6 0.2670       22.46 10.46 32.92 51.21 -18.29 AVG         7 0.3165       29.93 10.46 40.39 59.80 -19.41 QP         8 0.3165 19.42 10.46 29.88 49.80 -19.92 AVG         9 0.5640 26.71 10.49 37.20 56.00 -18.80 QP         10 0.5640 16.21 10.49 26.70 46.00 -19.30 AVG         11 2.4765 26.85 10.63 37.48 56.00 -18.52 QP	1		0.1635	37.73	10.44	48.17	65.28	-17.11	QP	
4       0.2130       25.13       10.45       35.58       53.09       -17.51       AVG         5       0.2670       32.73       10.46       43.19       61.21       -18.02       QP         6       0.2670       22.46       10.46       32.92       51.21       -18.29       AVG         7       0.3165       29.93       10.46       40.39       59.80       -19.41       QP         8       0.3165       19.42       10.46       29.88       49.80       -19.92       AVG         9       0.5640       26.71       10.49       37.20       56.00       -18.80       QP         10       0.5640       16.21       10.49       26.70       46.00       -19.30       AVG         11       2.4765       26.85       10.63       37.48       56.00       -18.52       QP	2		0.1635	26.85	10.44	37.29	55.28	-17.99	AVG	
5       0.2670       32.73       10.46       43.19       61.21       -18.02       QP         6       0.2670       22.46       10.46       32.92       51.21       -18.29       AVG         7       0.3165       29.93       10.46       40.39       59.80       -19.41       QP         8       0.3165       19.42       10.46       29.88       49.80       -19.92       AVG         9       0.5640       26.71       10.49       37.20       56.00       -18.80       QP         10       0.5640       16.21       10.49       26.70       46.00       -19.30       AVG         11       2.4765       26.85       10.63       37.48       56.00       -18.52       QP	3	*	0.2130	36.00	10.45	46.45	63.09	-16.64	QP	
6 0.2670 22.46 10.46 32.92 51.21 -18.29 AVG 7 0.3165 29.93 10.46 40.39 59.80 -19.41 QP 8 0.3165 19.42 10.46 29.88 49.80 -19.92 AVG 9 0.5640 26.71 10.49 37.20 56.00 -18.80 QP 10 0.5640 16.21 10.49 26.70 46.00 -19.30 AVG 11 2.4765 26.85 10.63 37.48 56.00 -18.52 QP	4		0.2130	25.13	10.45	35.58	53.09	-17.51	AVG	
7 0.3165 29.93 10.46 40.39 59.80 -19.41 QP 8 0.3165 19.42 10.46 29.88 49.80 -19.92 AVG 9 0.5640 26.71 10.49 37.20 56.00 -18.80 QP 10 0.5640 16.21 10.49 26.70 46.00 -19.30 AVG 11 2.4765 26.85 10.63 37.48 56.00 -18.52 QP	5		0.2670	32.73	10.46	43.19	61.21	-18.02	QP	
8 0.3165 19.42 10.46 29.88 49.80 -19.92 AVG 9 0.5640 26.71 10.49 37.20 56.00 -18.80 QP 10 0.5640 16.21 10.49 26.70 46.00 -19.30 AVG 11 2.4765 26.85 10.63 37.48 56.00 -18.52 QP	6	;	0.2670	22.46	10.46	32.92	51.21	-18.29	AVG	
9 0.5640 26.71 10.49 37.20 56.00 -18.80 QP 10 0.5640 16.21 10.49 26.70 46.00 -19.30 AVG 11 2.4765 26.85 10.63 37.48 56.00 -18.52 QP	7	,	0.3165	29.93	10.46	40.39	59.80	-19.41	QP	
10 0.5640 16.21 10.49 26.70 46.00 -19.30 AVG 11 2.4765 26.85 10.63 37.48 56.00 -18.52 QP	8		0.3165	19.42	10.46	29.88	49.80	-19.92	AVG	
11 2.4765 26.85 10.63 37.48 56.00 -18.52 QP	9	)	0.5640	26.71	10.49	37.20	56.00	-18.80	QP	
<u> </u>	10		0.5640	16.21	10.49	26.70	46.00	-19.30	AVG	
12 2.4765 15.96 10.63 26.59 46.00 -19.41 AVG	11		2.4765	26.85	10.63	37.48	56.00	-18.52	QP	
	12		2.4765	15.96	10.63	26.59	46.00	-19.41	AVG	

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EUT	LCD Monitor	Model Name	**27G2*****
Temperature	25°C	Relative Humidity	53%
Test Voltage	AC 230V/50Hz	Phase	Line
Test Mode	HDMI 1 1080P 1.8m		
Test Engineer	Jivey Jiang		



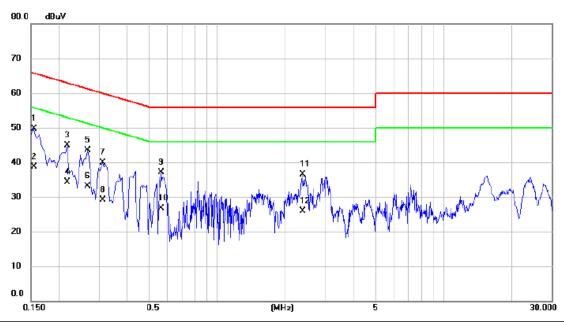
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBu∨	dBuV	dB	Detector	Comment
1	*	0.1635	38.32	10.48	48.80	65.28	-16.48	QP	
2		0.1635	27.46	10.48	37.94	55.28	-17.34	AVG	
3		0.2670	33.54	10.48	44.02	61.21	-17.19	QP	
4		0.2670	23.16	10.48	33.64	51.21	-17.57	AVG	
5		0.3210	29.79	10.50	40.29	59.68	-19.39	QP	
6		0.3210	18.52	10.50	29.02	49.68	-20.66	AVG	
7		0.5594	26.13	10.52	36.65	56.00	-19.35	QP	
8		0.5594	15.41	10.52	25.93	46.00	-20.07	AVG	
9		2.4180	27.04	10.66	37.70	56.00	-18.30	QP	
10		2.4180	16.58	10.66	27.24	46.00	-18.76	AVG	
11		3.0120	25.97	10.69	36.66	56.00	-19.34	QP	
12		3.0120	15.42	10.69	26.11	46.00	-19.89	AVG	

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EUT	LCD Monitor	Model Name	**27G2*****		
Temperature	25°C	Relative Humidity	53%		
Test Voltage	AC 230V/50Hz	Phase	Neutral		
Test Mode	HDMI 1 1080P 1.8m				
Test Engineer	Jivey Jiang				



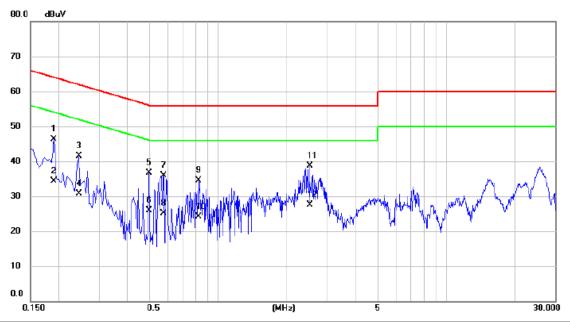
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBu∀	dB	Detector	Comment
1	*	0.1544	39.25	10.43	49.68	65.76	-16.08	QP	
2		0.1544	28.36	10.43	38.79	55.76	-16.97	AVG	
3		0.2174	34.36	10.45	44.81	62.92	-18.11	QP	
4		0.2174	23.85	10.45	34.30	52.92	-18.62	AVG	
5		0.2670	32.96	10.46	43.42	61.21	-17.79	QP	
6		0.2670	22.65	10.46	33.11	51.21	-18.10	AVG	
7		0.3120	29.45	10.45	39.90	59.92	-20.02	QP	
8		0.3120	18.74	10.45	29.19	49.92	-20.73	AVG	
9		0.5640	26.61	10.49	37.10	56.00	-18.90	QP	
10		0.5640	16.21	10.49	26.70	46.00	-19.30	AVG	
11		2.3774	25.94	10.63	36.57	56.00	-19.43	QP	
12		2.3774	15.36	10.63	25.99	46.00	-20.01	AVG	

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EUT	LCD Monitor	Model Name	**27G2*****		
Temperature	25°C	Relative Humidity	53%		
Test Voltage	AC 110V/60Hz	Phase	Line		
Test Mode	HDMI 1 1920*1080/144Hz 1.8m				
Test Engineer	Jivey Jiang				



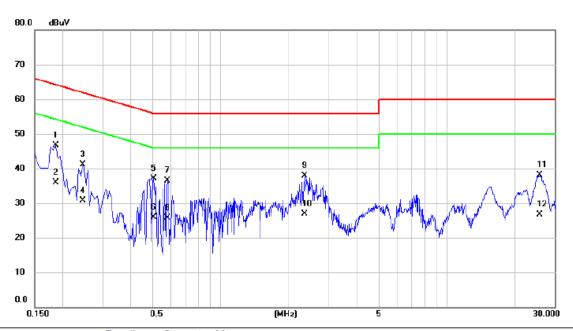
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1905	35.73	10.48	46.21	64.01	-17.80	QP	
2	0.1905	23.76	10.48	34.24	54.01	-19.77	AVG	
3	0.2444	31.01	10.47	41.48	61.95	-20.47	QP	
4	0.2444	20.15	10.47	30.62	51.95	-21.33	AVG	
5	0.4964	26.15	10.50	36.65	56.06	-19.41	QP	
6	0.4964	15.32	10.50	25.82	46.06	-20.24	AVG	
7	0.5774	25.30	10.52	35.82	56.00	-20.18	QP	
8	0.5774	14.68	10.52	25.20	46.00	-20.80	AVG	
9	0.8204	23.89	10.53	34.42	56.00	-21.58	QP	
10	0.8204	13.56	10.53	24.09	46.00	-21.91	AVG	
11 *	2.5260	28.01	10.67	38.68	56.00	-17.32	QP	
12	2.5260	16.85	10.67	27.52	46.00	-18.48	AVG	

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EUT	LCD Monitor	Model Name	**27G2*****		
Temperature	25°C	Relative Humidity	53%		
Test Voltage	AC 110V/60Hz	Phase	Neutral		
Test Mode	HDMI 1 1920*1080/144Hz 1.8m				
Test Engineer	Jivey Jiang				



No	. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1860	36.17	10.45	46.62	64.21	-17.59	QP	
2		0.1860	25.43	10.45	35.88	54.21	-18.33	AVG	
3		0.2444	30.73	10.47	41.20	61.95	-20.75	QP	
4		0.2444	20.15	10.47	30.62	51.95	-21.33	AVG	
5		0.5054	26.61	10.49	37.10	56.00	-18.90	QP	
6		0.5054	15.32	10.49	25.81	46.00	-20.19	AVG	
7		0.5820	25.95	10.49	36.44	56.00	-19.56	QP	
8		0.5820	15.21	10.49	25.70	46.00	-20.30	AVG	
9		2.3460	27.38	10.62	38.00	56.00	-18.00	QP	
10		2.3460	16.25	10.62	26.87	46.00	-19.13	AVG	
11		25.7955	27.13	11.00	38.13	60.00	-21.87	QP	
12		25.7955	15.68	11.00	26.68	50.00	-23.32	AVG	

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# 5. EMC EMISSION TEST- EN55032:2015+AC:2016

### **5.1 RADIATED EMISSION**

### **5.1.1 LIMITS**

Class A equipment up to 1000MHz

Table	Frequency		Class A limits		
clause	range MHz	Facility (see Table A.1)	Distance m	Detector type/ bandwidth	dB(μV/m)
	30-230	OATS/SAC	10		40
A2.1	230-1000	UATS/SAC	10	Quasi peak /	47
	30-230	OATS/SAC		120 kHz	50
A2.2	230-1000	UATS/SAC	3		57
	30-230	ΓΛD	10		42 to 35
A2.3	230-1000	FAR	10	Quasi peak /	42
	30-230	ΓΛD	3	120 kHz	52 to 45
A2.4	230-1000	FAR	ა		52

Class A equipment above 1000MHz

		_		N.4				
Table Frequency				Measurement				
	clause	range MHz	Facility (see Table A.1)	Distance m	Detector type/bandwidth	dB(μV/m)		
		1000-3000			Average /	56		
	A3.1	3000-6000	FSOATS	3	1 MHz	60		
		1000-3000	FSUATS	3	Peak /	76		
	A3.2	3000-6000			1 MHz	80		

Apply A3.1 and A3.2 across the frequency range from 1000 MHz to the highest required frequency of measurement derived from Table 1.

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Class B equipment up to 1000MHz

Table	Frequency		Measurement					
clause	range MHz	Facility (see Table A.1)	Distance m	Detector type/ bandwidth	dB(μV/m)			
	30-230	OATS/SAC	10		30			
A4.1	230-1000	OATO/OAC	10	Quasi peak /	37			
	30-230	OATS/SAC	3	120 kHz	40			
A4.2	230-1000	UATS/SAC	3		47			
	30-230	ΓΛD	10		32 to 25			
A4.3	230-1000	FAR	10	Quasi peak /	32			
	30-230	ΕΛD	3	120 kHz	42 to 35			
A4.4	230-1000	FAR	3		42			

Apply only table clause A4.1 or A4.2 or A4.3 or A4.4 across the entire frequency range. These requirements are not applicable to the local oscillator and harmonics frequencies of equipment covered by Table A.6.

Class B equipment above 1000MHz

<u> </u>	5 B equipment above 1000m12					
Table	Frequency		Class B limits			
clause	range MHz	Facility (see Table A.1)	Distance m	Detector type/bandwidth	dB(μV/m)	
	1000-3000	,		Average /	50	
A5.1	3000-6000	FSOATS	3	1 MHz	54	
	1000-3000	FSUAIS	3	Peak /	70	
A5.2	3000-6000			1 MHz	74	

Apply A5.1 and A5.2 across the frequency range from 1000 MHz to the ighest required frequency of measurement derived from Table 1.

#### Notes:

- (1) The limit for radiated test was performed according to as following: EN 55032
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) The test result calculated as following: Measurement Value = Reading Level + Correct Factor Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use) Margin Level = Measurement Value - Limit Value





Required highest frequency for radiated measurement

Highest internal frequency (F <sub>x</sub> )	Highest measured frequency
MHz	MHz
F <sub>x</sub> ≦108	1000
108 <f<sub>x ≤500</f<sub>	2000
500 < F <sub>x</sub> ≤ 1000	5000
F <sub>x</sub> >1000	5 <sup>th</sup> up to a maximum 6 GHz,

Note for FM and TV broadcast receiver,  $F_x$  is determined from the highest frequency generated or used excluding the local oscillator and tuned frequencies.

### **5.1.2 MEASUREMENT INSTRUMENTS LIST**

# Up to 1GHz:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Pre-Amplifier	EMC INSTRUMENT	EMC 9135	980284	Mar. 10, 2020
2	Pre-Amplifier	EMC INSTRUMENT	EMC 9135	980283	Mar. 10, 2020
3	Trilog-Broadband Antenna	Schwarzbeck	VULB9168	00946	Nov. 24, 2019
4	Trilog-Broadband Antenna	Schwarzbeck	VULB9168	00947	Nov. 24, 2019
5	Cable	emci	LMR-400(5m +11m+15m)	N/A	Aug. 07, 2019
6	Cable	emci	LMR-400(5m +8m+8m)	N/A	Aug. 07, 2019
7	Measurement Software	Farad	EZ-EMC Ver.BTL-2AN T-1	N/A	N/A
8	Multi-Device Controller	ETS-Lindgren	2090	N/A	N/A
9	Attenuator	EMCI	EMCI-N-6-06	N0670	Nov. 24, 2019
10	Attenuator	EMCI	EMCI-N-6-06	N0671	Nov. 24, 2019
11	Receiver	Keysight	N9038A	MY54450004	Aug. 11, 2019
12	MXE EMI Receiver	Agilent	N9038A	MY53220133	Mar. 10, 2020

Remark: "N/A" denotes no model name, no serial no. or no calibration specified.

All calibration period of equipment list is one year.





#### Above 1GHz:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Horn Antenna	EMCO	3115	9605-4803	Mar. 23, 2020
2	Amplifier	Agilent	8449B	3008A02584	Aug. 11, 2019
3	MXE EMI Receiver	Agilent	N9038A	MY53220133	Mar. 10, 2020
4	Measurement Software	Farad	EZ-EMC Ver.BTL-2AN T-1	N/A	N/A
5	Multi-Device Controller	ETS-Lindgren	2090	N/A	N/A
6	Controller	MF	MF-7802	MF780208159	N/A
7	Cable	Micable Inc.	B10-01-01-5 M	18047123	Mar. 01, 2020
8	Cable	Micable Inc.	B10-01-01-10 M	18072746	Mar. 01, 2020
9	Cable	N/A	A50-3.5M3.5 M-1.5M-AT	18041824	Mar. 01, 2020

Remark: "N/A" denotes no model name, no serial no. or no calibration specified. All calibration period of equipment list is one year.

#### **5.1.3 TEST PROCEDURE**

- a. The measuring distance of 10 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. (below 1GHz).
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. (above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured. but AVG Mode didn't perform. (above 1GHz)
- g. For the actual test configuration, please refer to the related Item Block Diagram of system tested (please refer to 3.3).

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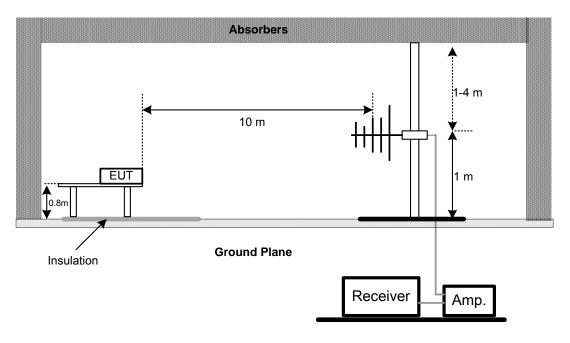


### **5.1.4 DEVIATION FROM TEST STANDARD**

No deviation

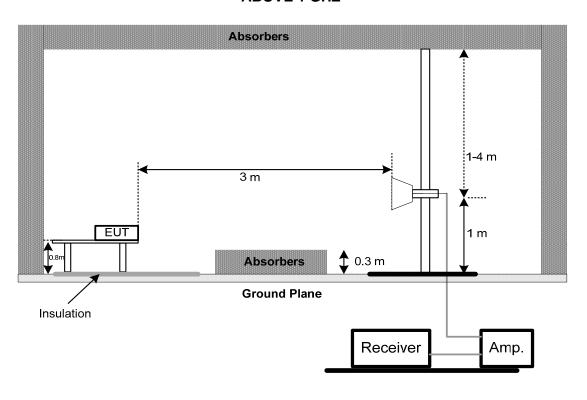
# 5.1.5 TEST SETUP

**UP TO 1 GHZ** 



Note: The antenna can be moved between 1 to 4 meters above the ground.

# **ABOVE 1 GHZ**



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### **5.1.6 MEASUREMENT DISTANCE**

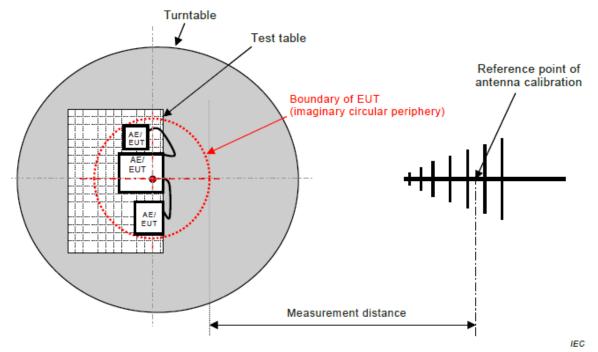


Figure C.1 - Measurement distance

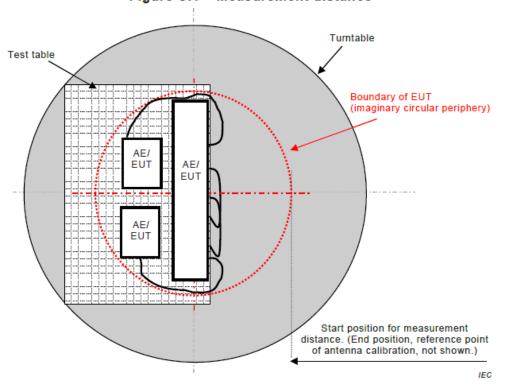


Figure C.2 - Boundary of EUT, Local AE and associated cabling

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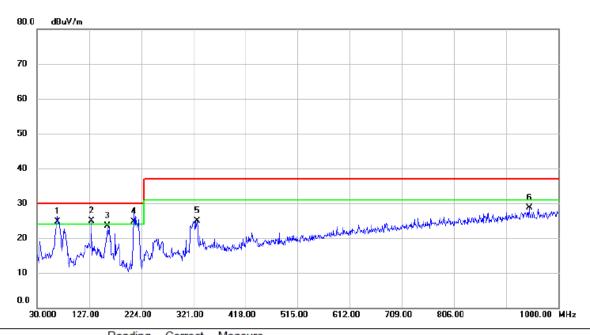
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# 5.1.7 TEST RESULTS (UP TO 1 GHZ)

EUT	UT LCD Monitor		**27G2******			
Temperature 25°C		Relative Humidity	60%			
Test Voltage	AC 230V/50Hz	Polarization	Vertical			
Test Mode	HDMI 1 1920*1080/144Hz 1.8m					
Test Engineer Jivey Jiang						

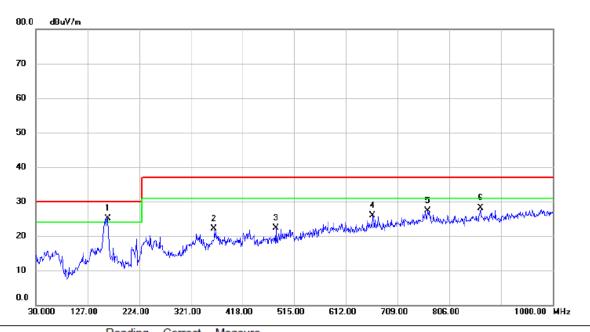


	No.	Mk.	Freq.	Level	Factor	ment	Limit	Margin		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1	İ	68.3150	43.13	-18.39	24.74	30.00	-5.26	QP	
_	2	* *	131.3650	42.34	-17.49	24.85	30.00	-5.15	QP	
_	3	•	161.4350	39.47	-16.02	23.45	30.00	-6.55	QP	
_	4	! 2	209.9350	43.82	-19.10	24.72	30.00	-5.28	QP	
_	5	3	328.2750	39.10	-14.29	24.81	37.00	-12.19	QP	
_	6	(	945.6800	32.33	-3.56	28.77	37.00	-8.23	QP	
_										





EUT	LCD Monitor	Model Name	**27G2*****				
Temperature	rature 25°C		60%				
Test Voltage	AC 230V/50Hz	Polarization	Horizontal				
Test Mode	HDMI 1 1920*1080/144Hz 1.8m						
Test Engineer	r Jivey Jiang						



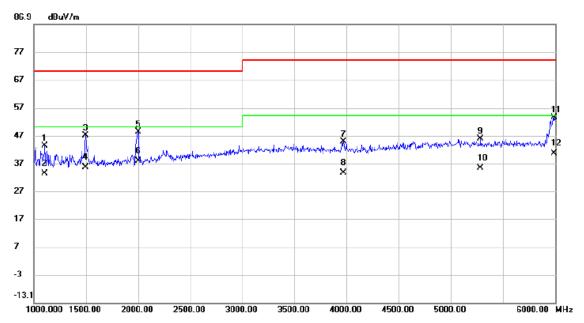
	No.	Mk.	Freq.	Level	Factor	ment	Limit	Margin		
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1	*	164.8300	41.20	-16.13	25.07	30.00	-4.93	QP	
_	2		364.6500	35.83	-13.73	22.10	37.00	-14.90	QP	
-	3		480.0800	33.62	-11.37	22.25	37.00	-14.75	QP	
_	4		661.4700	33.65	-7.78	25.87	37.00	-11.13	QP	
_	5		765.2600	33.47	-6.21	27.26	37.00	-9.74	QP	
_	6		864.2000	33.35	-5.28	28.07	37.00	-8.93	QP	
_										





# 5.1.8 TEST RESULTS (ABOVE 1 GHZ)

EUT	JT LCD Monitor		**27G2*****				
Temperature 25°C		Relative Humidity	60%				
Test Voltage	AC 230V/50Hz	Polarization	Vertical				
Test Mode	HDMI 1 1920*1080/144Hz 1.8m						
Test Engineer Jivey Jiang							

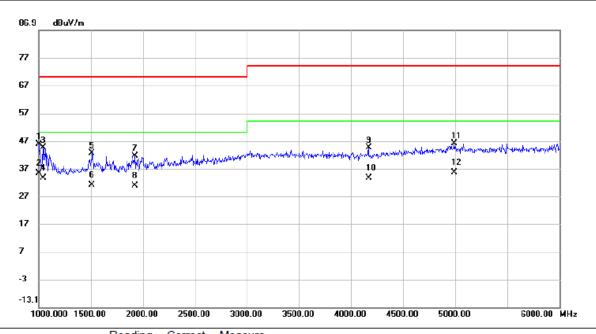


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	1	1105.000	49.05	-5.69	43.36	70.00	-26.64	peak	
2	1	1105.000	38.98	-5.69	33.29	50.00	-16.71	AVG	
3	1	1497.500	50.41	-3.49	46.92	70.00	-23.08	peak	
4	1	1497.500	39.12	-3.49	35.63	50.00	-14.37	AVG	
5	2	2000.000	50.02	-1.75	48.27	70.00	-21.73	peak	
6	* 2	2000.000	39.53	-1.75	37.78	50.00	-12.22	AVG	
7	3	3972.500	39.88	4.91	44.79	74.00	-29.21	peak	
8	3	3972.500	28.65	4.91	33.56	54.00	-20.44	AVG	
9	Ę	5285.000	37.51	8.24	45.75	74.00	-28.25	peak	
10	Ę	5285.000	26.92	8.24	35.16	54.00	-18.84	AVG	
11	Ę	5987.500	44.63	8.87	53.50	74.00	-20.50	peak	
12	Ę	5987.500	31.64	8.87	40.51	54.00	-13.49	AVG	





EUT	LCD Monitor	Model Name	**27G2*****				
Temperature	perature 25°C		60%				
Test Voltage	AC 230V/50Hz	Polarization	Horizontal				
Test Mode	HDMI 1 1920*1080/144Hz 1.8m						
Test Engineer	Jivey Jiang						



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	•	1000.000	52.10	-6.28	45.82	70.00	-24.18	peak	
2	* *	1000.000	41.49	-6.28	35.21	50.00	-14.79	AVG	
3	,	1040.000	50.70	-6.05	44.65	70.00	-25.35	peak	
4	•	1040.000	39.58	-6.05	33.53	50.00	-16.47	AVG	
5	•	1512.500	46.09	-3.44	42.65	70.00	-27.35	peak	
6	•	1512.500	34.38	-3.44	30.94	50.00	-19.06	AVG	
7	•	1920.000	43.56	-2.02	41.54	70.00	-28.46	peak	
8	,	1920.000	32.72	-2.02	30.70	50.00	-19.30	AVG	
9	4	4167.500	39.18	5.39	44.57	74.00	-29.43	peak	
10	4	4167.500	28.26	5.39	33.65	54.00	-20.35	AVG	
11	4	4992.500	38.06	7.94	46.00	74.00	-28.00	peak	
12	4	4992.500	27.58	7.94	35.52	54.00	-18.48	AVG	

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### 5.2 CONDUCTED EMISSION MEASUREMENT AT AC MAINS POWER PORTS

### **5.2.1 LIMITS**

Requirements for conducted emissions from AC mains power ports of Class A equipment

Table clause	Frequency Range MHz	Coupling Device	Detector Type / bandwidth	Class A Limits (dB(μV) )				
A9.1	0.15 - 0.5	AMN	Quasi Peak /	79				
A9.1	0.5 - 30		9 kHz	73				
A9.2	0.15 - 0.5	AMN	Average /	66				
A9.Z	0.5 - 30	AIVIIN	9 kHz	60				
Apply A9.1 an	Apply A9.1 and A9.2 across the entire frequency range.							

Requirements for conducted emissions from AC mains power ports of Class B equipment

Table clause	Frequency Range MHz	Coupling Device	Detector Type / bandwidth	Class B Limits (dB(μV) )				
	0.15 - 0.5		Quasi Peak / 9 kHz	66-56				
A10.1	0.5 - 5	AMN		56				
	5 - 30			60				
	0.15 - 0.5		A	56-46				
A10.2	0.5 - 5	AMN	Average / 9 kHz	46				
	5 - 30		J KI IZ	50				
Apply A10.1 a	Apply A10.1 and A10.2 across the entire frequency range.							

# NOTE:

(1) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)

Margin Level = Measurement Value - Limit Value

### 5.2.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100382	Mar. 10, 2020
2	Measurement Software	Farad	EZ-EMC Ver.NB-03A 1-01	N/A	N/A
3	Cable	N/A	RG223	12m	Mar. 12, 2020
4	LISN	EMCO	3816/2	00052765	Mar. 10, 2020
5	TWO-LINE V-NETWORK	R&S	ENV216	101447	May. 19, 2020
6	50Ω Terminator	SHX	TF5-3	15041305	Mar. 10, 2020

Remark: "N/A" denotes no model name, no serial no. or no calibration specified.

All calibration period of equipment list is one year.

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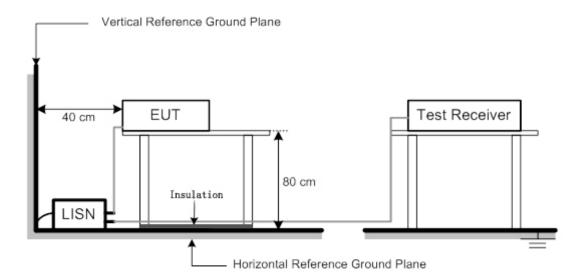
### **5.2.3 TEST PROCEDURE**

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

### **5.2.4 DEVIATION FROM TEST STANDARD**

No deviation

### 5.2.5 TEST SETUP







# **5.2.6 TEST RESULTS**

EUT	LCD Monitor	Model Name	**27G2******			
Temperature	25°C	Relative Humidity	53%			
Test Voltage	AC 230V/50Hz	Phase	Line			
Test Mode	HDMI 1 1920*1080/144Hz	HDMI 1 1920*1080/144Hz 1.8m				
Test Engineer	Jivey Jiang					

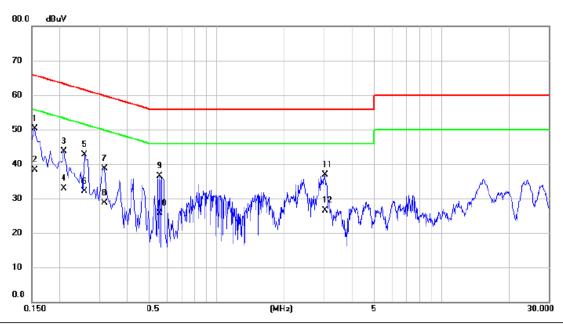


No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.1590	38.58	10.48	49.06	65.52	-16.46	QP	
2	0.1590	26.87	10.48	37.35	55.52	-18.17	AVG	
3	0.2084	33.50	10.48	43.98	63.27	-19.29	QP	
4	0.2084	22.65	10.48	33.13	53.27	-20.14	AVG	
5	0.2625	31.65	10.48	42.13	61.35	-19.22	QP	
6	0.2625	20.58	10.48	31.06	51.35	-20.29	AVG	
7	0.3120	28.20	10.49	38.69	59.92	-21.23	QP	
8	0.3120	17.56	10.49	28.05	49.92	-21.87	AVG	
9	0.5684	26.25	10.52	36.77	56.00	-19.23	QP	
10	0.5684	15.83	10.52	26.35	46.00	-19.65	AVG	
11	2.9984	25.97	10.69	36.66	56.00	-19.34	QP	
12	2.9984	15.62	10.69	26.31	46.00	-19.69	AVG	





EUT	LCD Monitor	Model Name	**27G2*****	
Temperature	25°C	Relative Humidity	53%	
Test Voltage	AC 230V/50Hz	Phase	Neutral	
Test Mode	HDMI 1 1920*1080/144Hz 1.8m			
Test Engineer	Jivey Jiang			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1544	39.83	10.43	50.26	65.76	-15.50	QP	
2		0.1544	27.86	10.43	38.29	55.76	-17.47	AVG	
3		0.2084	33.20	10.45	43.65	63.27	-19.62	QP	
4		0.2084	22.54	10.45	32.99	53.27	-20.28	AVG	
5		0.2580	32.18	10.47	42.65	61.50	-18.85	QP	
6		0.2580	21.69	10.47	32.16	51.50	-19.34	AVG	
7		0.3165	28.31	10.46	38.77	59.80	-21.03	QP	
8		0.3165	18.16	10.46	28.62	49.80	-21.18	AVG	
9		0.5550	25.99	10.49	36.48	56.00	-19.52	QP	
10		0.5550	15.26	10.49	25.75	46.00	-20.25	AVG	
11		3.0390	26.30	10.65	36.95	56.00	-19.05	QP	
12		3.0390	15.95	10.65	26.60	46.00	-19.40	AVG	

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# 6. HARMONIC AND FLICKER TEST

# **6.1 HARMONIC CURRENT EMISSIONS**

### **6.1.1 LIMITS**

		E	EN 61000-3-2	2		
Equipment Category	Harmonic Order	Max. Permissible Harmonic Current	Equipment Category	Harmonic Order	Max. Permissible Harmonic Current	
	n	А	Equipment Category   Harmonic Order	Α	mA/w	
	Odd Ha	rmonics		Odd	d Harmonics	only
	3	2.30		3	2.30	3.4
	5	1.14	Class D	5	1.14	1.9
	7	0.77		7	0.77	1.0
	9	0.40		9	0.40	0.5
	11	0.33		11	0.33	0.35
Class A	13	0.21		13	0.21	0.30
	15≤n≤39	0.15 x 15/n		15≤n≤39	0.15 x 15/n	3.85/n
	Even Ha	armonics				
	2	1.08				
	4	0.43				
	6	0.30				
	8≤n≤40	0.23 x 8/n				

# **6.1.2 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Harmonics and Flicker Analyzer	California Instruments	PACS-1	72344	Aug. 13, 2019
2	3KVA AC Power source	California Instruments	3001ix	56309	Aug. 11, 2019
3	Measurement Software	California	CTS4.0 Version 4.21	N/A	N/A

Remark: "N/A" denotes no model no., no serial No. or no calibration specified.

All calibration period of equipment list is one year.





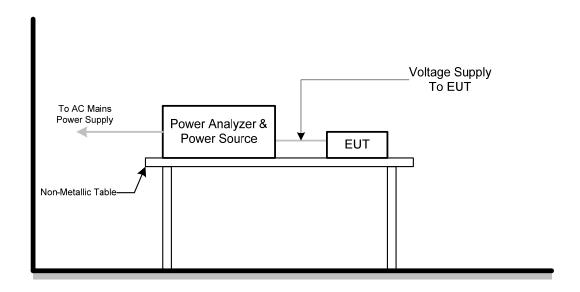
### **6.1.3 TEST PROCEDURE**

- a. The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating conditions.
- b. The classification of EUT is according to of EN 61000-3-2. The EUT is classified as follows:
  - Class A: Balanced three-phase equipment, Household appliances excluding equipment as Class D, Tools excluding portable tools, Dimmers for incandescent lamps, audio equipment, equipment not specified in one of the three other classes.
  - Class B: Portable tools; Arc welding equipment which is not professional equipment.
  - Class C: Lighting equipment.
  - Class D: Equipment having a specified power less than or equal to 600 W of the following types: Personal computers and personal computer monitors and television receivers.
- c. The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the time necessary for the EUT to be exercised.

### 6.1.4 DEVIATION FROM TEST STANDARD

No deviation

### 6.1.5 TEST SETUP



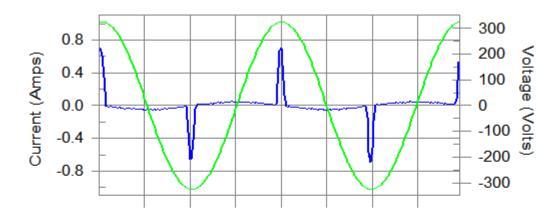




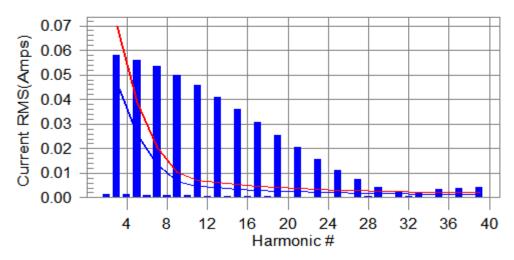
# **6.1.6 TEST RESULTS**

Harmonic - Class D							
EUT	LCD Monitor	Model Name	**27G2*****				
Temperature	25°C	Relative Humidity	55%				
Test Voltage	AC 230V/50Hz						
Test Mode	HDMI 1 1920*1080/144Hz						

Current & voltage waveforms



Harmonics and Class D limit line European Limits



Test result: N/L Worst harmonics H0-0.0% of 150% limit, H0-0% of 100% limit





Current Test Result Summary (Run time)							
EUT	LCD Monitor	Model Name	**27G2*****				
Temperature	25°C	Relative Humidity	55%				
Test Voltage	AC 230V/50Hz						
Test Mode	HDMI 1 1920*1080/144Hz						

Highest parameter values during test:

 V\_RMS (Volts): 230.18
 Frequency(Hz): 50.00

 I\_Peak (Amps): 0.729
 I\_RMS (Amps): 0.156

 I\_Fund (Amps): 0.069
 Crest Factor: 4.701

 Power (Watts): 13.7
 Power Factor: 0.384

Harm#Harms(avg) 100%Limit %of Limit Harms(max) 150%Limit %of Limit Status

2 3 4	0.002 0.058 0.001	0.000 0.047 0.000	N/A N/A N/A	0.002 0.060 0.002	0.000 0.070 0.000	N/A N/A N/A	N/L N/L N/L
5 6	0.056 0.001	0.026 0.000	N/A N/A	0.057 0.001	0.039 0.000	N/A N/A	N/L N/L
7 8	0.053 0.001	0.014 0.000	N/A N/A	0.054 0.001	0.021 0.000	N/A N/A	N/L N/L
9	0.050	0.007	N/A N/A	0.050	0.000	N/A N/A	N/L
10	0.001	0.000	N/A	0.001	0.000	N/A	N/L
11 12	0.046 0.001	0.005 0.000	N/A N/A	0.046 0.001	0.007 0.000	N/A N/A	N/L N/L
13	0.041	0.004	N/A	0.041	0.006	N/A	N/L
14 15	0.001 0.036	0.000 0.004	N/A N/A	0.001 0.036	0.000 0.005	N/A N/A	N/L N/L
16	0.000	0.004	N/A N/A	0.030	0.003	N/A N/A	N/L
17	0.031	0.003	N/A	0.031	0.005	N/A	N/L
18 19	0.000 0.025	0.000 0.003	N/A N/A	0.001 0.026	0.000 0.004	N/A N/A	N/L N/L
20	0.000	0.000	N/A	0.001	0.000	N/A	N/L
21 22	0.020 0.000	0.003 0.000	N/A N/A	0.021 0.000	0.004 0.000	N/A N/A	N/L N/L
23	0.000	0.000	N/A N/A	0.000	0.003	N/A N/A	N/L
24	0.000	0.000	N/A	0.001	0.000	N/A	N/L
25 26	0.011 0.000	0.002 0.000	N/A N/A	0.011 0.001	0.003 0.000	N/A N/A	N/L N/L
27	0.007	0.002	N/A	0.008	0.003	N/A	N/L
28 29	0.000 0.004	0.000 0.002	N/A N/A	0.001 0.005	0.000 0.003	N/A N/A	N/L N/L
30	0.004	0.002	N/A N/A	0.003	0.003	N/A N/A	N/L
31	0.002	0.002	N/A	0.002	0.003	N/A	N/L
32 33	0.000 0.002	0.000 0.002	N/A N/A	0.001 0.002	0.000 0.002	N/A N/A	N/L N/L
34	0.000	0.000	N/A	0.000	0.000	N/A	N/L
35 36	0.003 0.000	0.002 0.000	N/A N/A	0.003 0.000	0.002 0.000	N/A N/A	N/L N/L
37	0.000	0.000	N/A N/A	0.004	0.000	N/A N/A	N/L
38	0.000	0.000	N/A	0.000	0.000	N/A	N/L
39 40	0.004 0.000	0.001 0.000	N/A N/A	0.004 0.000	0.002 0.000	N/A N/A	N/L N/L
-							•

Note: The EUT power level is below 75.0 Watts and therefore has no defined limits

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Voltage Source Verification Data (Run time)							
EUT	LCD Monitor	Model Name	**27G2*****				
Temperature	25°C	Relative Humidity	55%				
Test Voltage	AC 230V/50Hz						
Test Mode	HDMI 1 1920*1080/144Hz						

Highest parameter values during test:
Voltage (Vrms):230.18
I\_Peak (Amps):0.729
I\_Fund (Amps):0.069
Power (Watts): 13.7 Frequency(Hz): 50.00 I\_RMS (Amps): 0.156 Crest Factor: 4.701 Power Factor: 0.384

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2 3 4 5 6 7 8 9 10 11 12 13 14 15 17 18	0.119 0.473 0.060 0.044 0.024 0.049 0.019 0.014 0.023 0.041 0.017 0.031 0.016 0.035 0.016 0.023 0.014	0.460 2.072 0.460 0.921 0.460 0.690 0.460 0.230 0.230 0.230 0.230 0.230 0.230 0.230	25.75 22.81 13.00 4.82 5.27 7.07 4.08 3.08 4.89 17.78 7.56 13.42 6.96 15.15 6.97 9.88 5.92	OK OK OK OK OK OK OK OK OK OK OK
18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	0.014 0.029 0.015 0.025 0.012 0.024 0.006 0.013 0.008 0.013 0.007 0.005 0.006 0.008	0.230 0.230 0.230 0.230 0.230 0.230 0.230 0.230 0.230 0.230 0.230 0.230 0.230	5.92 12.54 6.61 11.06 5.35 10.43 2.41 5.78 3.53 5.44 3.20 2.28 2.41 3.59 2.32	OK OK OK OK OK OK OK OK OK OK
33 34 35 36 37 38 39 40	0.008 0.003 0.008 0.004 0.012 0.003 0.009 0.006	0.230 0.230 0.230 0.230 0.230 0.230 0.230 0.230	3.56 1.17 3.28 1.58 5.11 1.34 4.04 2.45	OK OK OK OK OK OK OK





# 6.2 VOLTAGE CHANGES, VOLTAGE FLUCTUATIONS AND FLICKER TEST

### **6.2.1 LIMITS**

Tests	Limits EN 61000-3-3	Descriptions	
Pst	≤ 1.0, Tp= 10 min.	Short Term Flicker Indicator	
Plt	≤ 0.65, Tp=2 hr.	Long Term Flicker Indicator	
dc	≤ 3.3%	Relative Steady-State V-Chang	
dmax	≤ 4%	Maximum Relative V-change	
d (t)	≤ 500 ms	Relative V-change characteristic	

### **6.2.2 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Harmonics and Flicker Analyzer	California Instruments	PACS-1	72344	Aug. 13, 2019
2	3KVA AC Power source	California Instruments	3001ix	56309	Aug. 11, 2019
3	Measurement Software	California	CTS4.0 Version 4.21	N/A	N/A

Remark: "N/A" denotes no model name, no serial No. or no calibration specified.

All calibration period of equipment list is one year.

#### 6.2.3 TEST PROCEDURE

- a. Tests was performed according to the Test Conditions/Assessment of Voltage Fluctuations specified in EN 61000-3-3 depend on which standard adopted for compliance measurement.
- b. All types of harmonic current and/or voltage fluctuation in this report are assessed by direct measurement using flicker-meter.

### 6.2.4 DEVIATION FROM TEST STANDARD

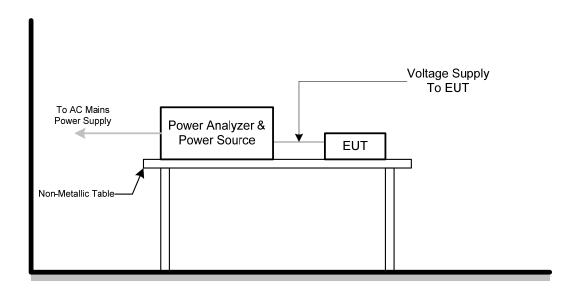
No deviation

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# 6.2.5 TEST SETUP



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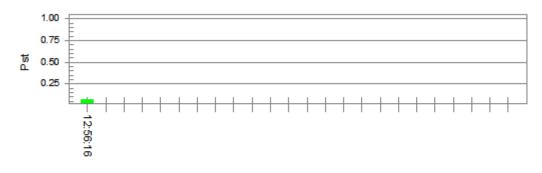


# **6.2.6 TEST RESULTS**

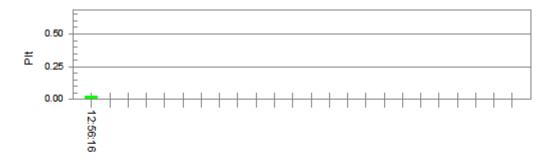
EUT	LCD Monitor	Model Name	**27G2*****
Temperature 25°C		Relative Humidity	55%
Test Voltage	AC 230V/50Hz		
Test Mode	HDMI 1 1920*1080/144Hz		

### Psti and limit line

# European Limits



# Plt and limit line



Parameter values recorded during the test:

vims at the end of test (voit).	Z30.11			
T-max (mS):	0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period): Highest Plt (2 hr. period):	0.064	Test limit:	1.000	Pass
Highest Plt (2 hr. períod):	0.028	Test limit:	0.650	Pass





# 7. EMC IMMUNITY TEST

# 7.1 STANDARD COMPLIANCE/SEVERITY LEVEL/CRITERIA

Tests Standard No.	Test Specification Level / Test Mode	Test Ports	Criteria
Electrostatic discharge	±8 kV air discharge ±4 kV contact discharge (Direct Mode)	Enclosure	В
EN 61000-4-2 (ESD)	±4kV HCP discharge ±4kV VCP discharge (Indirect Mode)	Enclosure	В
Radiated, radio-frequency, electromagnetic field immunity EN 61000-4-3 (RS)	80 MHz to 1000 MHz 3V/m(unmodulated, r.m.s), 1 kHz, 80%, AM modulated	Enclosure	А
Electrical fast transient/burst	±0.5kV(peak) 5/50ns Tr/Th 5kHz Repetition Frequency (100kHz Repetition Frequency for xDSL equipment)	Signal ports and telecommunication ports (Only applicable to cable length>3 m)	В
immunity EN 61000-4-4 (EFT/Burst)	±0.5kV(peak) 5/50ns Tr/Th 5kHz Repetition Frequency	DC Power Ports	В
	±1 kV(peak) 5/50ns Tr/Th 5kHz Repetition Frequency	AC Power Ports	В
	±1 kV(peak) 10/700 Tr/Th µs( <b>NOTE</b> ) (without primary protection)	Signal ports and telecommunication ports	С
	±4 kV(peak) 10/700 Tr/Th µs( <b>NOTE</b> ) (with primary protectors fitted)	(applicable only to ports connect directly to outdoor cables)	С
Surge immunity EN 61000-4-5 (Surges)	±0.5 kV(peak) 1.2/50(8/20) Tr/Th μs	DC Power Ports (applicable only to ports connect directly to outdoor cables)	В
	±1 kV(peak) 1.2/50(8/20) Tr/Th μs (line to line)	A.C. Double Death	В
	±2 kV(peak) 1.2/50(8/20) Tr/Th μs (line to earth or ground)	AC Power Ports	В





	0.15 MHz to 80 MHz 3V(unmodulated, r.m.s), 1kHz 80%, AM 150Ω source impedance	Signal ports and telecommunication ports (Only applicable to cable length>3 m)	Α
Immunity to conducted disturbances, induced by radio-frequency fields EN 61000-4-6 (Injected Current)	0.15 MHz to 80 MHz 3V(unmodulated, r.m.s), 1kHz 80%, AM 150Ω source impedance	(unmodulated, r.m.s), 1kHz %, AM DC Power Ports	
	0.15 MHz to 80 MHz 3V(unmodulated, r.m.s), 1kHz 80%, AM 150Ω source impedance	AC Power Ports	Α
Power frequency magnetic field immunity EN 61000-4-8 (PFMF)	50 Hz or 60Hz, 1A/m(r.m.s)	Enclosure	A
Voltage dips, short interruptions and voltage variations immunity EN 61000-4-11 (Voltage Interruption/Dips)	Voltage reduction > 95% 0.5 period Voltage reduction 30% 25 periods Voltage reduction > 95% 250 periods	AC Power Ports	B C C

# Note.

Where the coupling network for the 10/700 µs waveform affects the functioning of high speed data ports, the test shall be carried out using a 1,2/50 (8/20) µs waveform and appropriate coupling network.





# 7.2 GENERAL PERFORMANCE CRITERIA

According to **EN55024** standard, the general performance criteria as following:

Criterion A	The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
Criterion B	After the test, the equipment shall continue to operate as intended without operator Intervention. No degradation of performance or loss of function is allowed, after the application of the phenomenon below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.  During the test, degradation of performance is allowed. However, no change of operating state if stored data allowed to persist after the test. If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
Criterion C	Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the

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### 7.3 ELECTROSTATIC DISCHARGE IMMUNITY TEST (ESD)

### 7.3.1 TEST SPECIFICATION

Basic Standard	EN 61000-4-2
Discharge Impedance	330 ohm / 150 pF
Required Performance	В
Discharge Voltage	Air Discharge: ±2 kV, ±4 kV, ±8 kV (Direct)
	Contact Discharge: ±2 kV, ±4 kV (Direct/Indirect)
Polarity	Positive & Negative
Number of Discharge	Air Discharge: min. 20 times at each test point
	Contact Discharge: min. 200 times in total
Discharge Mode	Single Discharge
Discharge Period	1 second minimum

#### 7.3.2 MEASUREMENT INSTRUMENTS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	ESD Generator	TESEQ AG	NSG 437	450	Sep. 28, 2019

Remark: "N/A" denotes no model name, no serial No. or no calibration specified. All calibration period of equipment list is one year.

### 7.3.3 TEST PROCEDURE

The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manner:

a. Contact discharge was applied to conductive surfaces (Direct) and coupling planes (Indirect) of the EUT.

During the test, it was performed with single discharges. For the single discharge time between successive single discharges was at least 1 second. The EUT shall be exposed to at least 200 discharges, 100 each at negative and positive polarity, at a minimum of four test points. One of the test points shall be subjected to at least 50 indirect discharges to the center of the front edge of the horizontal coupling plane. The remaining three test points shall each receive at least 50 direct contact discharges.

If no direct contact test points are available, then at least 200 indirect discharges shall be applied in the indirect mode. Test shall be performed at a maximum repetition rate of one discharge per second.

Vertical Coupling Plane (VCP):

The coupling plane, of dimensions 0.5m x 0.5m, is placed parallel to, and positioned at a distance 0.1m from, the EUT, with the Discharge Electrode touching the coupling plane.

The four faces of the EUT will be performed with electrostatic discharge.

Horizontal Coupling Plane (HCP):

The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1m from the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.

b. Air discharges at insulation surfaces of the EUT.

It was at least ten single discharges with positive and negative at the same selected point.

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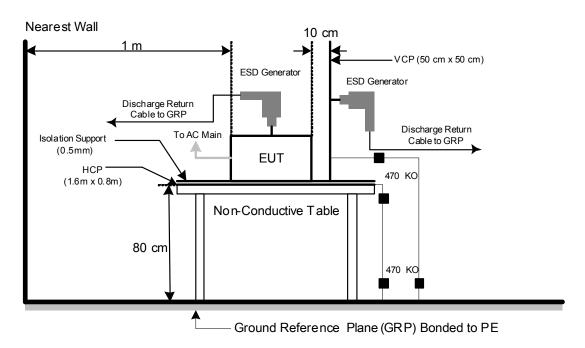




#### 7.3.4 DEVIATION FROM TEST STANDARD

No deviation

#### 7.3.5 TEST SETUP



#### Note:

### **TABLE-TOP EQUIPMENT**

The configuration consisted of a wooden table 0.8 meters high standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum at least 0.25mm thick, and 2.5 meters square connected to the protective grounding system. A Horizontal Coupling Plane  $(1.6m \times 0.8m)$  was placed on the table and attached to the GRP by means of a cable with 940k total impedance. The equipment under test was installed in a representative system as described in EN 61000-4-2, and its cables were placed on the HCP and isolated by an insulating support of 0.5mm thickness. A distance of1-meter minimum was provided between the EUT and the walls of the laboratory and any other metallic structure.

#### FLOOR-STANDING EQUIPMENT

The equipment under test was installed in a representative system as described in EN 61000-4-2, and its cables were isolated from the Ground Reference Plane by an insulating support of 0.1-meter thickness. The GRP consisted of a sheet of aluminum that is at least 0.25mm thick, and 2.5meters square connected to the protective grounding system and extended at least 0.5 meters from the EUT on all sides.





#### 7.3.6 TEST RESULTS

EUT	LCD Monitor	Model Name	**27G2******
Temperature	24°C	Relative Humidity	48%
Test Voltage	AC 230V/50Hz	Pressure	1016hPa
Test Mode	HDMI 1 1920*1080/144Hz		

Mode		Air Discharge						Contact Discharge						
	21	۲V	41	۲V	8	kV	- 1	۲V	2k	V	4	۲V	- k	۲V
Location	Р	N	Р	N	Р	N	Р	N	Р	N	Р	N	Р	N
1	Α	Α	Α	Α	Α	Α	-	-	Α	Α	Α	Α	-	-
2	Α	Α	Α	Α	Α	Α	-	ı	ı	-	ı	-	-	-
3	Α	Α	Α	Α	Α	Α	-	-	-	-	ı	-	-	-
4	Α	Α	Α	Α	Α	Α	-	ı	ı	-	ı	-	-	-
5	Α	Α	Α	Α	Α	Α	-	•	ı	-	ı	-	-	-
6	Α	Α	Α	Α	Α	Α	-	ı	ı	-	ı	-	-	-
7	Α	Α	Α	Α	Α	Α	-	ı	ı	-	ı	-	-	-
Criteria	В					-			В		-			
Result	A				-			A			-			
Judgment			PA	SS				-		P/	ASS		-	-

Mode		HCP Contact Discharge						VCP Contact Discharge				
	2	۲V	4	4kV		kV	21	۲V	4	۲V	- I	٠V
Location	Р	Ν	Р	Ν	Р	Ν	Р	N	Р	N	Р	N
1	Α	Α	Α	Α	-	-	Α	Α	Α	Α	-	-
2	Α	Α	Α	Α	-	-	Α	Α	Α	Α	-	-
3	Α	Α	Α	Α	-	-	Α	Α	Α	Α	-	-
4	Α	Α	Α	Α	-	-	Α	Α	Α	Α	-	-
Criteria		В			_			В				-
Result	•	Α				-			4	•		-
Judgment		PA	SS	•		-		PA	SS	•		-

#### Note:

- 1) P/N denotes the Positive/Negative polarity of the output voltage.
- 2) Test condition:

Direct/Indirect(HCP/VCP) discharges: Minimum 50 times (Positive/Negative) at eachpoint.

Air discharges: Minimum 20 times (Positive/Negative) at each point.

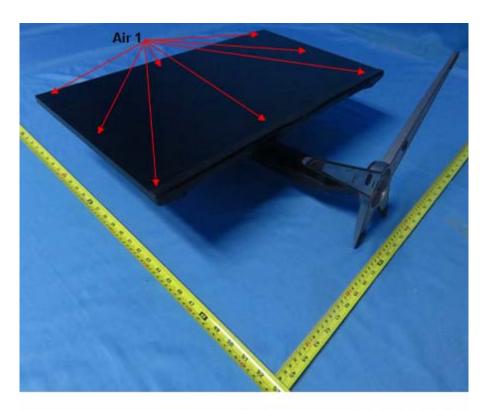
- 3) Test location(s) in which discharge (Air and contact discharge) to be applied illustrated by photos shown in next page(s)
- 4) The Indirect (HCP/VCP) discharges description of test point as following: 1.left side; 2.right side; 3.front side; 4.rear side.
- 5) N/A denotes test is not applicable in this test report
- 6) Criterion A: No observation of any performance degradation.
- 7) Criterion B: Some degradation of performance is observed but the equipment continues to operate as intended.
- 8) Criterion C: Loss of functionality, but self-recoverable by user, without loss of information or settings.

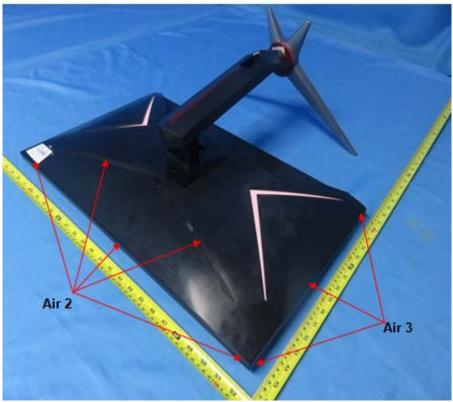
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# PHOTO(S) SHOWN THE LOCATION(S) OF ESD EVALUATED



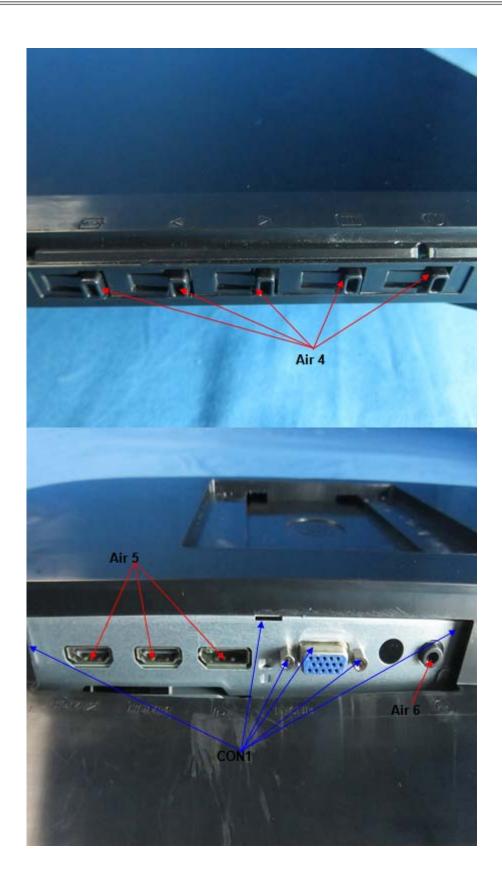


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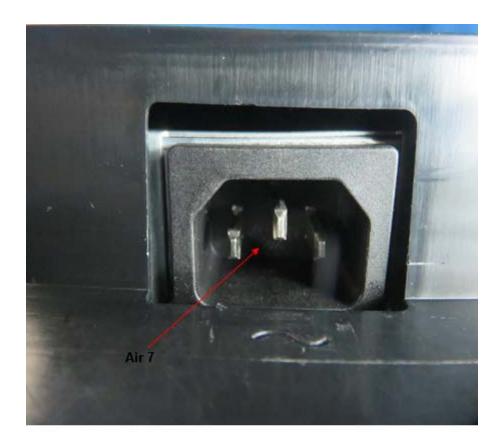












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## 7.4 RADIATED, RADIO-FREQUENCY, ELECTROMAGNETIC FIELD IMMUNITY TEST (RS)

#### 7.4.1 TEST SPECIFICATION

Basic Standard	EN 61000-4-3
Required Performance	Α
Frequency Range	80 MHz - 1000 MHz
Field Strength	3 V/m(unmodulated, r.m.s)
Modulation	1 kHz Sine Wave, 80%, AM Modulation
Frequency Step	1% of fundamental
Polarity of Antenna	Horizontal and Vertical
Test Distance	3 m
Antenna Height	1.55 m
Dwell Time	at least 3 seconds

#### 7.4.2 MEASUREMENT INSTRUMENTS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	MXG Analog Signal Generator	Agilent	N5181A	MY49060710	Aug. 11, 2019
2	Power amplifier	MILMEGA	80RF1000-25 0	1064833	Aug. 20, 2020
3	Antenna	ETS	3142C	47662	Mar. 23, 2020
4	Measurement Software	TOYO	IM5/RS Ver 3.8.050	N/A	N/A

Remark: "N/A" denotes no model name, no serial No. or no calibration specified. All calibration period of equipment list is one year.

#### 7.4.3 TEST PROCEDURE

The EUT and support equipment, which are placed on a table that is 0.8 meter above ground and the testing was performed in a fully-anechoic chamber.

The testing distance from antenna to the EUT was 3 meters.

The other condition as following manner:

- a. The field strength level was 3 V/m(unmodulated, r.m.s).
- b. The frequency range is swept from 80 MHz to 1000 MHz, with the signal 80% amplitude modulated with a 1 kHz sine wave. The rate of sweep did not exceed 1.5x 10-3 decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.
- c. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
- d. The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.

#### 7.4.4 DEVIATION FROM TEST STANDARD

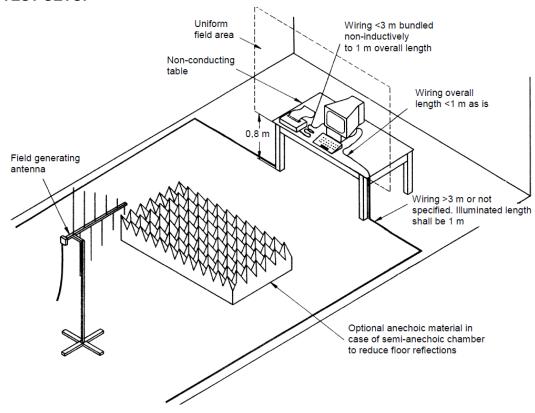
No deviation

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#### 7.4.5 TEST SETUP



Note:

# **TABLE-TOP EQUIPMENT**

The EUT installed in a representative system as described in EN 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

### FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in EN 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

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# 7.4.6 TEST RESULTS

EUT	LCD Monitor	Model Name	**27G2******			
Temperature	5°C Relative Humidity 54%					
Test Voltage	AC 230V/50Hz					
Test Mode	HDMI 1 1920*1080/144Hz					

3V/m	Frequency Range (MHz)	RF Field Position	R.F. Field Strength	Azimuth	Criterion	Result	Judgment
80 - 1000 H / V (unmodulated, r.m.s) 90 A A A 1000Hz, 80%	80 - 1000	H/V	AM Modulated	90	A	Α	PASS

## Note:

- 1) P/N denotes the Positive/Negative polarity of the output voltage.
- 2) N/A denotes test is not applicable in this test report.
- 3) Criterion A: No observation of any performance degradation.
- 4) Criterion B: Some degradation of performance is observed but the equipment continues to operate as intended.
- 5) Criterion C: Loss of functionality, but self-recoverable by user, without loss of information or settings.

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# 7.5 ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST (EFT/BURST)

# 7.5.1 TEST SPECIFICATION

Basic Standard	EN 61000-4-4
Required Performance	В
Test Voltage	Power Line: ±1 kV
Polarity	Positive & Negative
Impulse Frequency	5 kHz: except for xDSL ports.
	100 kHz: only for single lines of xDSL ports.
Impulse Wave shape	5/50 ns
Burst Duration	15 ms
Burst Period	300 ms
Test Duration	Not less than 1 min.

#### 7.5.2 MEASUREMENT INSTRUMENTS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	THE MODULAR SOLUTION FOR 6 KV APPLICATIONS	Teseq	NSG 3060	1423	Aug. 11, 2019

Remark: "N/A" denotes no model name, no serial No. or no calibration specified. All calibration period of equipment list is one year.

## 7.5.3 TEST PROCEDURE

The EUT and support equipment(s) are placed on a table that is 0.8 meter high above a metal ground plane and should be located 0.1 m+/- 0.01m high above the Ground Reference Plane (1m\*1m min. and 0.65mm thick min).

The other condition as following manner:

- a. Both positive and negative polarity discharges were applied.
- b. The duration time of each test sequential was 1 minute

## 7.5.4 DEVIATION FROM TEST STANDARD

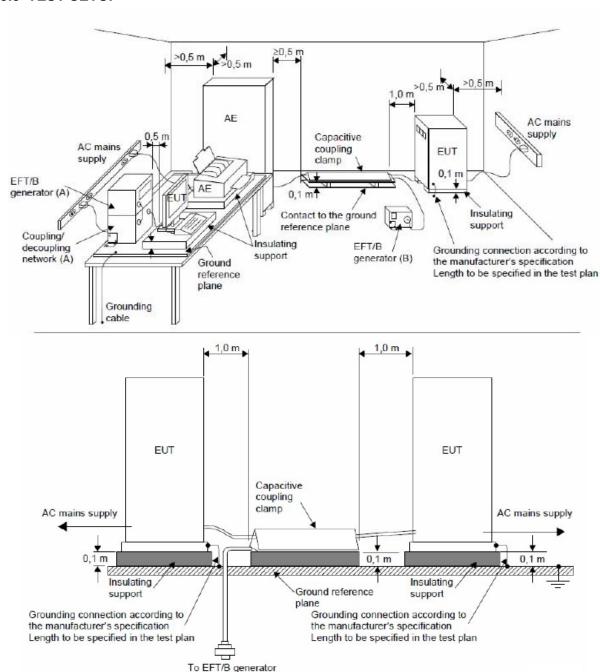
No deviation

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#### 7.5.5 TEST SETUP



#### Note:

### **TABLE-TOP EQUIPMENT**

The configuration consisted of a wooden table (0.8m high) standing on the Ground Reference Plane and should be located 0.1 m+/- 0.01m above the Ground Reference Plane. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system. A minimum distance of 0.5m was provided between the EUT and the walls of the laboratory or any other metallic structure.

# FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in EN 61000-4-4 and its cables were isolated from the Ground Reference Plane by an insulating support that is 0.1-meter thick. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system.





# 7.5.6 TEST RESULTS

EUT	LCD Monitor	Model Name	**27G2*****			
Temperature	5°C Relative Humidity 51%					
Test Voltage	C 230V/50Hz					
Test Mode	HDMI 1 1920*1080/144Hz					

EUT Ports	EUT Ports Tested		Repetition Frequency	Test Level 1kV	Criterion	Result	Judgment
	Line (L)	+	5 kHz	Α	В	А	PASS
	Line (L)	-	5 kHz	Α	Ь	A	PASS
	Noutral (NI)	+	5 kHz	Α	D	^	DACC
	Neutral (N)	-	5 kHz	Α	В	Α	PASS
	Cround (DE)	+	5 kHz	Α	В	А	DACC
	Ground (PE)	-	5 kHz	Α	Ь		PASS
AC mains power	L+N	+	5 kHz	Α	В	Α	PASS
ports		-	5 kHz	Α	Ь		
	Libe	+	5 kHz	Α	D	•	DAGG
	L+PE	-	5 kHz	Α	В	Α	PASS
	N+PE	+	5 kHz	Α	D	Α	DACC
	NTPE	-	5 kHz	Α	В	A	PASS
	L+N+PE	+	5 kHz	Α	В	۸	PASS
	LTINTPE	-	5 kHz	Α	D	Α	PASS

# Note:

- 1) P/N denotes the Positive/Negative polarity of the output voltage.
- 2) N/A denotes test is not applicable in this test report
- 3) Criterion A: No observation of any performance degradation.
- 4) Criterion B: Some degradation of performance is observed but the equipment continues to operate as intended.
- 5) Criterion C: Loss of functionality, but self-recoverable by user, without loss of information or settings.

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#### 7.6 SURGE IMMUNITY TEST

#### 7.6.1 TEST SPECIFICATION

Basic Standard	EN 61000-4-5
Required Performance	В
Wave-Shape	Combination Wave for power lines
	1.2/50 us Open Circuit Voltage
	8 /20 us Short Circuit Current
Test Voltage	Power Line: ±0.5 kV, ±1 kV, ±2 kV
Surge Input/Output	L-N, L-PE, N-PE
Generator Source	$2 \Omega$ of the low-voltage power supply network.
Impedance	12 $\Omega$ (10 $\Omega$ +2 $\Omega$ ) of the low-voltage power supply
	network and ground.
Polarity	Positive/Negative
Phase Angle:	AC Port: 0°/90°/180°/270°
Pulse Repetition Rate	1 time / min. (maximum)
Number of Tests	5 positive and 5 negative at selected points

#### 7.6.2 MEASUREMENT INSTRUMENTS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	THE MODULAR SOLUTION FOR 6 KV APPLICATIONS	Teseq	NSG 3060	1423	Aug. 11, 2019

Remark: "N/A" denotes no model name, no serial No. or no calibration specified.

All calibration period of equipment list is one year.

## 7.6.3 TEST PROCEDURE

a. For EUT power supply:

The surge is to be applied to the EUT power supply terminals via the capacitive coupling network. Decoupling networks are required in order to avoid possible adverse effects on equipment not under test that may be powered by the same lines, and to provide sufficient decoupling impedance to the surge wave. The power cord between the EUT and the coupling/decoupling networks shall be 2meters in length (or shorter).

- b. For test applied to unshielded unsymmetrically operated interconnection lines of EUT:

  The surge is applied to the lines via the capacitive coupling. The coupling /decoupling networks shall not influence the specified functional conditions of the EUT. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).
- c. For test applied to unshielded symmetrically operated interconnection /telecommunication lines of EUT:

The surge is applied to the lines via gas arrestors coupling. Test levels below the ignition point of the coupling arrestor cannot be specified. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).

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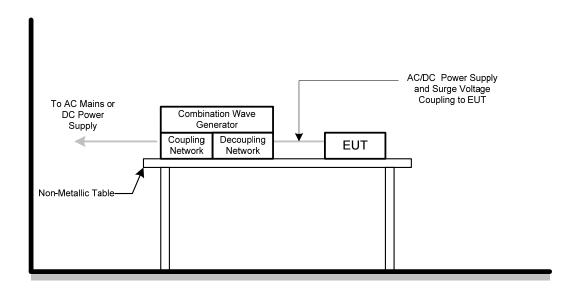




# 7.6.4 DEVIATION FROM TEST STANDARD

No deviation

# 7.6.5 TEST SETUP



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# 7.6.6 TEST RESULTS

EUT	LCD Monitor	Model Name	**27G2******				
Temperature	25°C	Relative Humidity	51%				
Test Voltage	AC 230V/50Hz	AC 230V/50Hz					
Test Mode	HDMI 1 1920*1080/144Hz						

Wave Form EUT Ports Tested		1.2/50(8/20)Tr/Thµs								
		Polarity	Dhaco	Voltage			Criterion	Result	Judgment	
		Polanty Ph	Filase	0.5kV		kV	kV			
		+/-	0°	Α	Α	-	-			
AC	L – N	+/-	90°	Α	Α	-	-	D	_	PASS
AC	(2 ohm)	+/-	180°	Α	Α	-	-	В	Α	PASS
		+/-	270°	Α	Α	-	-			

Move Form		1.2/50(8/20)Tr/Thµs								
	Wave Form EUT Ports Tested		Dhaca		Volta	age		Criterion	Result	Judgment
EUIF	oris resieu	Polarity	Phase	0.5kV	1kV	2kV	kV			_
		+/-	0°	Α	Α	Α	-	В	А	PASS
	L – PE	+/-	90°	Α	Α	Α	-			
	(12 ohm)	+/-	180°	Α	Α	Α	-			
AC		+/-	270°	Α	Α	Α	-			
AC		+/-	0°	Α	Α	Α	-			
	N – PE	+/-	90°	Α	Α	Α	-	В	^	PASS
	(12 ohm)	+/-	180°	Α	Α	Α	-	Ь	Α	PASS
		+/-	270°	Α	Α	Α	-			

## Note:

- 1) Polarity and Numbers of Impulses: 5 Pst / Ngt at each tested mode
- 2) N/A denotes test is not applicable in this Test Report
- 3) Criterion A: No observation of any performance degradation.
- 4) Criterion B: Some degradation of performance is observed but the equipment continues to operate as intended.
- 5) Criterion C: Loss of functionality, but self-recoverable by user, without loss of information or settings.

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# 7.7 IMMUNITY TO CONDUCTED DISTURBANCES, INDUCED BY RADIO-FREQUENCY FIELDS TEST (CS)

#### 7.7.1 TEST SPECIFICATION

Basic Standard	EN 61000-4-6
Required Performance	A
Frequency Range	0.15 MHz - 80 MHz
Field Strength	3 V (unmodulated, r.m.s.)
Modulation	1 kHz Sine Wave, 80%, AM Modulation
Frequency Step	1% of fundamental
Dwell Time	at least 3 seconds

# 7.7.2 MEASUREMENT INSTRUMENTS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Power CDN	FCC	FCC-801-M 2/M3-16A	100270	Mar. 10, 2020	
2	TEST SYSTEM FOR CONDUCTED AND RADIATED IMMUNITY	TESEQ	NSG 4070B	37513	Aug. 11, 2019	
3	Measurement Software	Farad	EZ-CS(V2. 0.1.2)	N/A	N/A	

Remark: "N/A" denotes no model name, no serial No. or no calibration specified. All calibration period of equipment list is one year.

### 7.7.3 TEST PROCEDURE

The EUT and support equipment, are placed on a table that is 0.8 meter above a metal ground plane measured 1m\*1m min. and 0.65mm thick min.

The other condition as following manner:

- a. The field strength level was 3 V (unmodulated, r.m.s.)
- b. The frequency range is swept from 150 kHz to 80 MHz, with the signal 80% amplitude modulated with a 1 kHz sine wave. The rate of sweep did not exceed 1.5x 10-3 decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.
- c. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.

#### 7.7.4 DEVIATION FROM TEST STANDARD

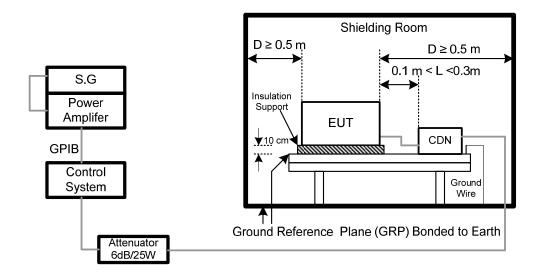
No deviation

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## 7.7.5 TEST SETUP



# NOTE:

#### FLOOR-STANDING EQUIPMENT

The equipment to be tested is placed on an insulating support of 0.1 meters height above a ground reference plane. All relevant cables shall be provided with the appropriate coupling and decoupling devices at a distance between 0.1 meters and 0.3 meters from the projected geometry of the EUT on the ground reference plane.





# 7.7.6 TEST RESULTS

EUT	LCD Monitor	Model Name	**27G2******				
Temperature	24°C	Relative Humidity	56%				
Test Voltage	AC 230V/50Hz	AC 230V/50Hz					
Test Mode	HDMI 1 1920*1080/144Hz						

Test Ports (Mode)	Freq.Range (MHz)	Field Strength	Criteria	Results	Judgment
Input/ Output AC.PowerPort	0.1580		Α	Α	PASS
Input/ Output DC. PowerPort	0.15 80	3V(unmodulat ed, r.m.s) AM Modulated 1000Hz, 80%	А	N/A	N/A
Signal Line (N/A)	0.15 80		Α	N/A	N/A

## Note:

- 1). N/A denotes test is not applicable in this test report.
- 2) Criterion A: No observation of any performance degradation.
- 3) Criterion B: Some degradation of performance is observed but the equipment continues to operate as intended.
- 4) Criterion C: Loss of functionality, but self-recoverable by user, without loss of information or settings.

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# 7.8 POWER FREQUENCY MAGNETIC FIELD IMMUNITY TEST (PFMF)

#### 7.8.1 TEST SPECIFICATION

Basic Standard	EN 61000-4-8
Required Performance	A
Frequency Range	50/60 Hz
Field Strength	1 A/m
Observation Time	1 minute
Inductance Coil	Rectangular type, 1mx1m

### 7.8.2 MEASUREMENT INSTRUMENTS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Magnetic Field test Generator	FCC	F-1000-4-8- G-125A	04032	Mar. 10, 2020
2	Magnetic Field immunity loop	Thermo KeyTek	F-1000-4-8/ 9/10-L-1M	04024	Mar. 10, 2020

Remark: "N/A" denotes no model name, no serial No. or no calibration specified. All calibration period of equipment list is one year.

#### 7.8.3 TEST PROCEDURE

The EUT and support equipment, are placed on a table that is 0.8 meter above a metal ground plane measured 1m\*1m min. and 0.65mm thick min.

The other condition as following manner:

- a. The equipment cabinets shall be connected to the safety earth directly on the GRP via the earth terminal of the EUT.
- b. The cables supplied or recommended by the equipment manufacturer shall be used. 1 meter of all cables used shall be exposed to the magnetic field.

#### 7.8.4 DEVIATION FROM TEST STANDARD

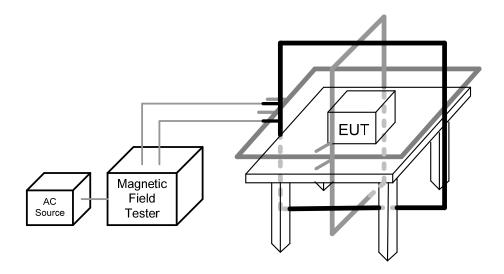
No deviation

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#### 7.8.5 TEST SETUP



#### Note:

# **TABLE-TOP EQUIPMENT**

The equipment shall be subjected to the test magnetic field by using the induction coil of standard dimension (1 m  $\times$  1 m). The induction coil shall then be rotated by 90 degrees in order to expose the EUT to the test field with different orientations.

#### FLOOR-STANDING EQUIPMENT

The equipment shall be subjected to the test magnetic field by using induction coils of suitable dimensions. The test shall be repeated by moving and shifting the induction coils, in order to test the whole volume of the EUT for each orthogonal direction. The test shall be repeated with the coil shifted to different positions along the side of the EUT, in steps corresponding to 50 percent of the shortest side of the coil. The induction coil shall then be rotated by 90 degrees in order to expose the EUT to the test field with different orientations.





# 7.8.6 TEST RESULTS

EUT	LCD Monitor	Model Name	**27G2******				
Temperature	25°C	Relative Humidity	51%				
Test Voltage	AC 230V/50Hz	AC 230V/50Hz					
Test Mode	HDMI 1 1920*1080/144Hz						

# 50Hz

Test Mode	Test Level	Antenna aspect	Duration (s)	Criteria	Results	Judgment
Enclosure	1 A/m	X	60	А	Α	PASS
Enclosure	1 A/m	Y	60	Α	Α	PASS
Enclosure	1 A/m	Z	60	Α	Α	PASS

## 60Hz

Test Mode	Test Level	Antenna aspect	Duration (s)	Criteria	Results	Judgment
Enclosure	1 A/m	х	60	А	Α	PASS
Enclosure	1 A/m	Y	60	Α	Α	PASS
Enclosure	1 A/m	Z	60	Α	Α	PASS

## Note:

- 1). N/A denotes test is not applicable in this test report.
- 2) Criterion A: No observation of any performance degradation.
- 3) Criterion B: Some degradation of performance is observed but the equipment continues to operate as intended.
- 4) Criterion C: Loss of functionality, but self-recoverable by user, without loss of information or settings.





# 7.9 VOLTAGE DIPS, SHORT INTERRUPTIONS AND VOLTAGE VARIATIONS IMMUNITY TEST

## 7.9.1 TEST SPECIFICATION

Basic Standard	EN 61000-4-11	
Required Performance	B (For >95% Voltage Dips)	
	C (For 30% Voltage Dips)	
	C (For >95% Voltage Interruptions)	
Test Duration Time	Minimum three test events in sequence	
Interval between Event	Minimum ten seconds	
Phase Angle	0°/180°	
Test Cycle	3 times	

#### 7.9.2 MEASUREMENT INSTRUMENTS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	THE MODULAR SOLUTION FOR 6 KV APPLICATIONS	Teseq	NSG 3060	1423	Aug. 11, 2019

Remark: "N/A" denotes no model name, no serial No. or no calibration specified.

All calibration period of equipment list is one year.

#### 7.9.3 TEST PROCEDURE

The EUT shall be tested for each selected combination of test levels and duration with a sequence of three dips/interruptions with intervals of 10 s minimum (between each test event). Each representative mode of operation shall be tested. Abrupt changes in supply voltage shall occur at zero crossings of the voltage waveform.

#### 7.9.4 DEVIATION FROM TEST STANDARD

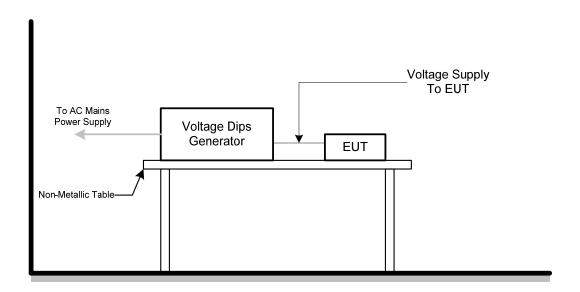
No deviation

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# 7.9.5 TEST SETUP



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# 7.9.6 TEST RESULTS

EUT	LCD Monitor	Model Name	**27G2******		
Temperature	25°C	Relative Humidity	51		
Test Voltage	AC 100V/50Hz, AC 230V/50Hz, AC 240V/50Hz				
Test Mode	HDMI 1 1920*1080/144Hz				

AC 230V/50Hz					
Voltage Reduction	Periods	Criteria	Results	Judgment	
Voltage dip >95%	0.5	В	А	PASS	
Voltage dip 30%	25	С	А	PASS	
Interruption>95%	250	С	С	PASS	

AC 230V/50Hz					
Voltage Reduction	Periods	Criteria	Results	Judgment	
Voltage dip >95%	0.5	В	А	PASS	
Voltage dip 30%	25	С	А	PASS	
Interruption>95%	250	С	С	PASS	

AC 240V/50Hz					
Voltage Reduction	Periods	Criteria	Results	Judgment	
Voltage dip >95%	0.5	В	А	PASS	
Voltage dip 30%	25	С	А	PASS	
Interruption>95%	250	С	С	PASS	

## Note:

- 1). N/A denotes test is not applicable in this test report.
- 2) Criterion A: No observation of any performance degradation.3) Criterion B: Some degradation of performance is observed but the equipment continues to operate as intended.
- 4) Criterion C: Loss of functionality, but self-recoverable by user, without loss of information or settings.

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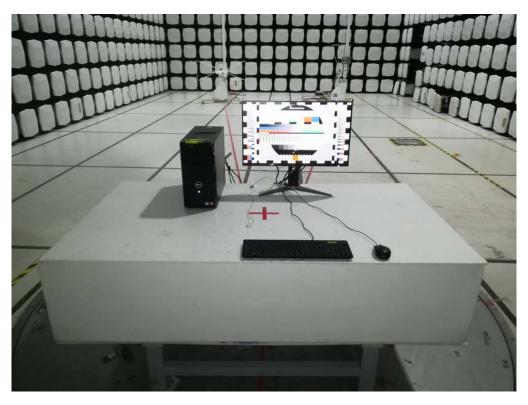


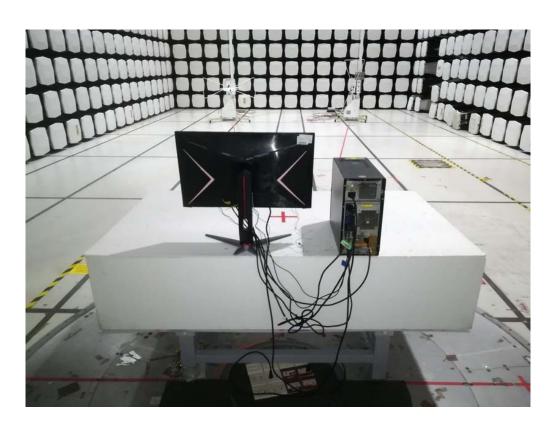


# **8. EUT TEST PHOTO**

EN 55032:2012+AC:2013 &2015

Radiated emissions up to 1 GHz

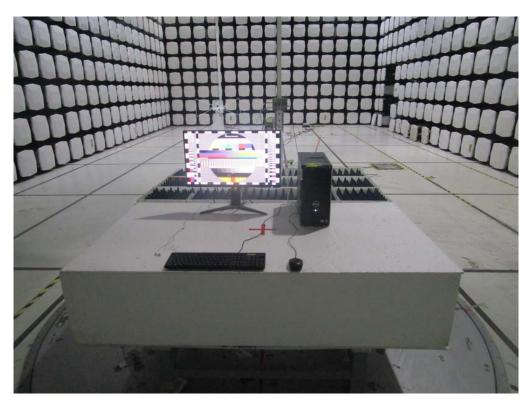








# Radiated emissions above 1 GHz









# Conducted emissions AC mains power port



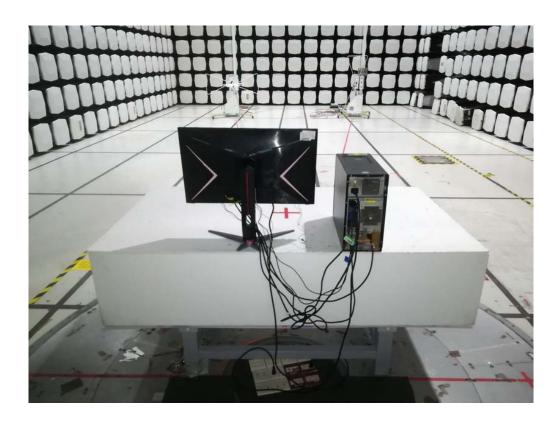






EN 55032:2015+AC:2016
Radiated emissions up to 1 GHz

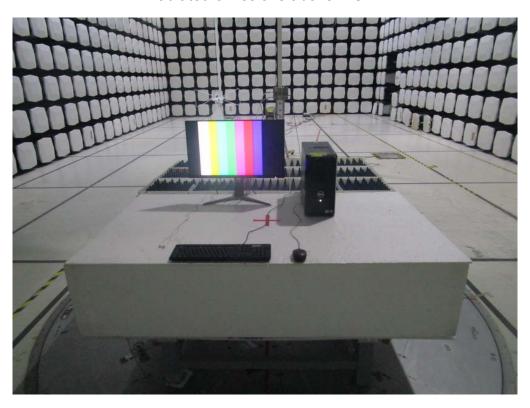








# Radiated emissions above 1 GHz









# Conducted emissions AC mains power port









# Harmonic current emissions



Voltage changes, voltage fluctuations and flicker







# Electrostatic discharge immunity



Radiated, radio-frequency, electromagnetic field immunity







# Electrical fast transient/burst immunity



Surge immunity



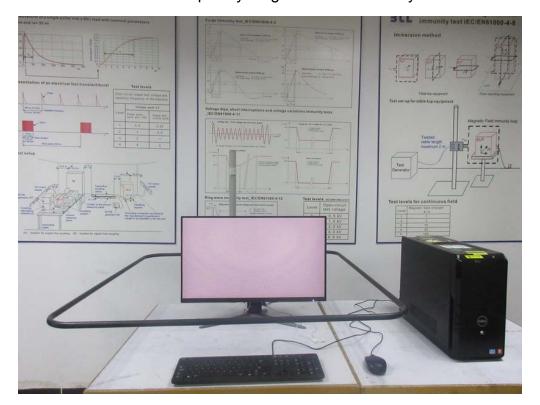




# Immunity to conducted disturbances, induced by radio-frequency fields



Power frequency magnetic field immunity



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Voltage dips, short interruptions and voltage variations immunity



**End of Test Report**