Test Report issued under the responsibility of:

SGS Tecnos, S.A.

TEST REPORT
CISPR 15
Equipment for General Lighting Purposes – EMC Requirements

Report Reference No. .....:	2415/1062
Date of issue: .....:	2015/12/18
Total number pages: .....:	74
Applicant´s name .....:	GIPUZKOALED S.COOP. PEQ.
Address .....:	EDIFICIO ENERTIC, PASEO UBARBUERU, 39 POLIGONO 27 20014 SAN SEBASTIAN (GUIPUZKOA)
Test specification:	
Standard.....:	IEC CISPR 15 (1) (Eighth Edition) + A1:2015 in conjunction with IEC 61547 (1) (Second Edition), IEC 61000-3-2 (Fourth Edition), IEC 61000-3-3 (Third Edition)
Test procedure .....:	CE Examination
Non-standard test method .....:	N/A
Supplementary information .....:	IEC CISPR 15 partially applied (See Verdict summary section) **(1) Standard out of accreditation scope: ENAC Nº 5/LE011**
Test Report Form No. .....:	IECCISPR15H
Test Report Form(s) Originator ....:	VDE Testing and Certification Institute
Master TRF .....:	2015-05

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing CB testing laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description .....:	LED Projector
Trademark .....:	GIPUZKOALED
Manufacturer .....:	GIPUZKOALED S.COOP. PEQ.
Model / Type reference .....:	CMP.215.VE.29.C
Rating(s) .....:	100-240V 50/60Hz
Derived models not tested .....:	CMP.215.VE.29.A & CMP.215.VE.29.B

Testing procedure and testing location:		
☒	**CB Testing Laboratory:**	SGS Tecnos, S.A. (Electric Test Laboratory)
Testing location / address ..... :		C/ Trespaderne, 29 – Edificio Barajas 1 28042 – MADRID (Spain)
☐	~~**Associated CB Test Laboratory.....**~~	
~~Testing location/ address .....:~~		
Tested by (name + signature) .....:		Rubén Bello Torralbo
Approved by (name + signature) .....:		Javier Morgado Durán
☐	~~**Testing procedure: TMP/CTF stage 1**~~	
☐	~~**Testing procedure: WMT/CTF stage 2**~~	
☐	~~**Testing procedure: SMT/CTF Stage 3 or 4**~~	

SGS Tecnos, S.A.
Laboratorio de Ensayos E&E

List of Attachments (including a total number of pages in each attachment): --	
Summary of testing:	See “Verdict summary section” below
Summary of compliance with National Differences: List of countries addressed ..... : ☐The product fulfils the requirements of..... :	EU Group Differences (No specific EU countries tested)

Copy of marking plate..... :	See section 1.2

Testing..... : Date of receipt of test item ..... : Date(s) of performance of tests... :	 2015/11/26 See dates for each test case.
Manufacturer´s Declaration regarding factories..... :	
The application for obtaining a Certificate includes more than one factory location and a declaration from the manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided..... :	☒ Not Applicable ☐ Yes (When differences exist, they shall be identified in the General Product Information section.)
Name and address of factory(ies) ..... :	GIPUZKOALED S.COOP. PEQ. EDIFICIO ENERTIC, PASEO UBARBUERU, 39 POLIGONO 27 20014 SAN SEBASTIAN (GUIPUZKOA)

General remarks:

Measurement uncertainties associated with other parameters variables determined during tests are available from the Laboratory at Customer's request.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.
A cross ☒ in a rectangular shape means that this option is applied.

Possible test case verdicts:	
- test case does not apply to test object.. :	N/A
- test object does meet requirement..... :	P (Pass)
- test object does not meet requirement.. :	F (Fail)
- test does not performed by laboratory limitation ..... :	N/P (Not Performed)

Definition of symbols used in this test report:

☒ Indicates that the listed condition, standard or equipment is applicable for this report.

☐ Indicates that the listed condition, standard or equipment is not applicable for this report.

Decimal separator used in this report..... :	☒ Comma (,)
	☐ Point (.)

The present Test Report covers the family of products CMP.215.VE.29.A (not tested), CMP.215.VE.29.B (not tested) and CMP.215.VE.29.C (model tested). The only different between models is the phosphor quantity on the LED; CMP.215.VE.29.A (3500K), CMP.215.VE.29.B (4000K) and CMP.215.VE.29.C (5000K). After reviewing the technical data of the equipments no additional test were required.

Table of Contents:

1 General description of test item(s)

Description ..... : Model Number ..... : Serial Number..... : Brand name ..... :	LED projector CMP.215.VE.29.C -- Gipuzkoa LED					
Ports ..... :	Port name and description		Cable			
			Specified length [m]	Attached during test	Shielded	
	Mains		0,30	☒	☐	
	Dimmer connection		0,30	☒	☐	
Supplemental information to the ports..... :	--					
Rated power supply..... :		Voltage and Frequency	Reference poles			
			N	L1	L2	L3
	☒	AC: 100-240V 50/60Hz	☒	☒	☐	☐
Rated Power..... : Protection Class ..... : Clock frequencies..... : Other parameters ..... :	-- I -- --					
Software version..... :	--					
Hardware version ..... :	--					
Dimensions in cm (W x H x D) ..... :	32 x 32 x 20					
Mounting position:	☐	Table top equipment				
	☒	Wall/Ceiling mounted equipment				
	☐	Floor standing equipment				
	☐	Hand-held equipment				
	☐	Other:				

<table>
<tr><td rowspan="2">Modules/parts ..... :</td><td colspan="2">Module/parts of test item</td><td>Type</td><td>Manufacturer</td></tr>
<tr><td colspan="2">None</td><td></td><td></td></tr>
<tr><td rowspan="10">Operating modes ..... :</td><td rowspan="2">No.</td><td rowspan="2">Operating mode of test item</td><td colspan="2">Applied for testing</td></tr>
<tr><td>Emission</td><td>Immunity</td></tr>
<tr><td>1</td><td>Light on (max. luminosity/100 kΩ)</td><td>☒</td><td>☐</td></tr>
<tr><td>2</td><td>Light on (min. luminosity/10 kΩ)</td><td>☒</td><td>☐</td></tr>
<tr><td>3</td><td>Light on (min luminosity/30 kΩ)</td><td>☒(2)</td><td>☐</td></tr>
<tr><td>4</td><td>Light on (50% luminosity/50 kΩ)</td><td>☒</td><td>☒</td></tr>
<tr><td>5</td><td>Light on (50% luminosity/65 kΩ)</td><td>☒(2)</td><td>☐</td></tr>
<tr><td>6</td><td>Light on (25% luminosity/47,5 kΩ)</td><td>☒(2)</td><td>☐</td></tr>
<tr><td>7</td><td>Light on (75% luminosity/82,5 kΩ)</td><td>☒(2)</td><td>☐</td></tr>
<tr><td>8</td><td>Manual switching operations
ON/OFF</td><td>☒</td><td>☐</td></tr>
<tr><td>Supplemental information to the operating modes ..... :</td><td colspan="4">(1) According to manufacturer specifications to perform the Harmonic current emission test the luminosity regulation is performed between 30 kΩ and 100 kΩ.
According manufacturer specifications the minimum regulation value used in normal performance is 30 kΩ</td></tr>
<tr><td rowspan="2">Accessories (not part of the test item) ..... :</td><td colspan="2">Accessory</td><td>Type</td><td>Manufacturer</td></tr>
<tr><td colspan="2">Dimmer</td><td>Not specified</td><td>Not specified</td></tr>
<tr><td rowspan="2">Documents as provided by the applicant ..... :</td><td colspan="2">Description</td><td>File name</td><td>Issue date</td></tr>
<tr><td colspan="2">None</td><td></td><td></td></tr>
<tr><td>Modifications to the test item during testing ..... :</td><td colspan="4">None</td></tr>
</table>

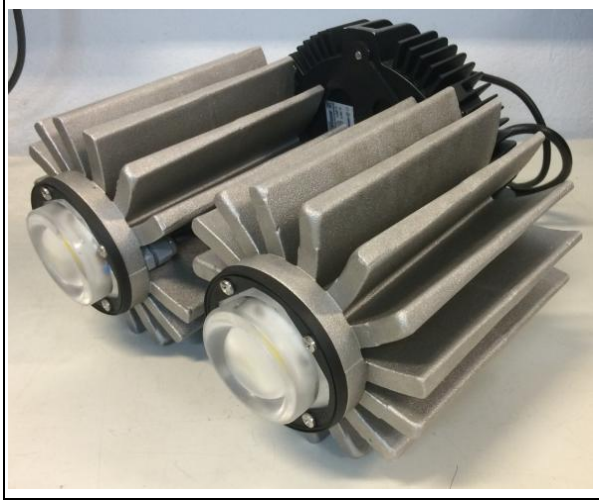
1.1.1 Lamp technology used in test item(s)

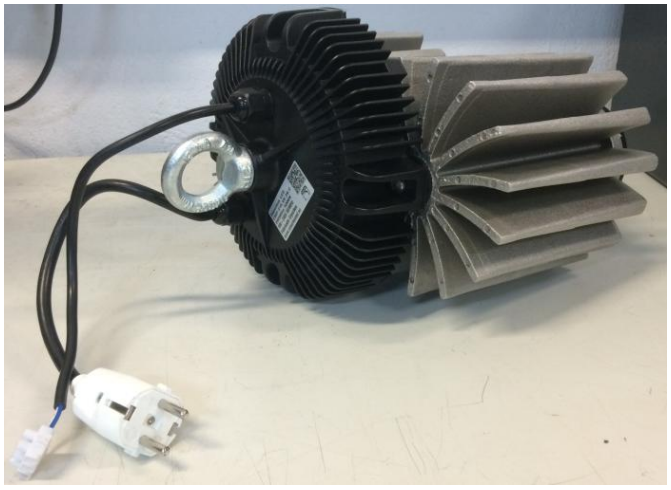
Lamp technology used ..... :	☐	Fluorescent lamp
	☐	High pressure discharge lamp (HID)
	☒	Light emitting diode (LED/OLED)
	☐	Tungsten halogen lamp
	☐	Incandescent lamp
	☐	Others:

1.2 Photos of the test item

Copy of marking plate .....:	

Photo of test item .....:	





2 Verdict summary section

CISPR-15			
Clause	**Requirement – Test case**	**Basic standard**	**Verdict**
4.2	Insertion loss	CISPR 15 (ed. 8) + am1	N/A (**)
4.3.1	Disturbance voltage at mains terminals	CISPR 15 (ed. 8) + am1	P
4.3.2	Disturbance voltage at load terminals	CISPR 16-1-2 (ed. 1) +am1+am2	N/A
4.3.3	Disturbance voltage at control terminals	CISPR 32 (ed.1)	P
4.4.1	Radiated electromagnetic disturbances (9 kHz to 30 MHz)	CISPR 16-1-4 (ed. 3) CISPR 15 (ed. 8) + am1	N/P
4.4.2	Radiated electromagnetic disturbances (30 MHz to 300 MHz)	CISPR 32 (ed. 1)	P (*)
Annex B	Independent method of measurement of radiated emission (CDNE)	CISPR 15(ed. 8) + am1	N/A
IEC 61000-3-2			
Clause	**Requirement – Test case**	**Basic standard**	**Verdict**
6.1	Control principle shall be allowed for the application according to the clause 6.1	IEC 61000-3-2 (ed. 4)	P
6.2	Harmonic current emissions	IEC 61000-4-7 (edition see page 28)	P
IEC 61000-3-3			
Clause	**Requirement – Test case**	**Basic standard**	**Verdict**
4	Voltage changes, voltage fluctuations and flicker	IEC 61000-4-15 (ed. 2)	P
IEC 61547			
Clause	**Requirement – Test case**	**Basic standard**	**Verdict**
5.2	Electrostatic discharge	IEC 61000-4-2 (ed. 2)	N/A (***)
5.3	Radio-frequency electromagnetic fields	IEC 61000-4-3 (ed. 3) + am1	P
5.4	Power frequency magnetic fields	IEC 61000-4-8 (ed. 1) + am1	P
5.5	Fast transients	IEC 61000-4-4 (ed. 2)	P
5.6	Injected currents (radio-frequency common mode)	IEC 61000-4-6 (ed. 3)	P
5.7	Surges	IEC 61000-4-5 (ed. 2)	P
5.8	Voltage dips and short interruptions	IEC 61000-4-11 (ed. 2)	P

Supplementary information:

(*) Radiated emission test, out of accreditation scope: ENAC Nº 5/LE011

N/P: - test does not performed by laboratory limitation

(**)N/A: Not applicable according Table D.1 and D.2

(***)N/A: Not applicable. Equipment not accessible to the user. According applicant specifications the equipment is only accessible to the technical service not to the user.

3 Test conditions

3.1 General

<table>
<tr><td rowspan="4">Environmental reference conditions .....:</td><td colspan="3">The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment.
The climatic conditions during the tests were within the following limits:</td></tr>
<tr><td>Temperature</td><td>Humidity</td><td>Atmospheric pressure</td></tr>
<tr><td>15 °C – 35 °C</td><td>30 % - 60 %</td><td>800 hPa – 1060 hPa</td></tr>
<tr><td colspan="3">If explicitly required in the basic standard or applied product standard the climatic values are recorded and documented separately in this test report.</td></tr>
<tr><td>Measurement uncertainties .....:</td><td colspan="3">For all measurements where guidance for the calculation of the instrumentation uncertainty of a measurement is specified in CISPR 16-4-2 , IEC 61000-4 series or a product standard, the measurement instrumentation uncertainty has been calculated an applied in accordance with these standards.
In all cases if the test laboratory uncertainty is larger than the value for UCISPR given in CISPR 16-4-2 the uncertainty are included in the test report annex.
In case the standards in the IEC 61000-4 series or the product standard requires the indication of the uncertainty in the report these uncertainty values are included in the annex.</td></tr>
</table>

3.2 Specific test conditions for CISPR 15

Test set up .....:	☒	CISPR 15
	☐	CISPR 30 technical report applied for built-in appliances

4 Emission

4.1 Insertion loss

Tested by..... :		
Test date..... :		
Test Location (stand)..... :		
Test set-up description ..... :	☐	Figure 1: Linear and U-type fluorescent lamp luminaires
	☐	Figure 2: Circular fluorescent lamp luminaires
	☐	Figure 3: Luminaires for single-capped fluorescent lamps with integrated starter
	☐	Other:
Supplementary Test set-up description ..... :		
Operating mode(s) ..... :		
Supplementary information ..... :	N/A: Not applicable according Table D.1 and D.2	

Test set-up photo	

Table: Measurement data for insertion loss

Frequency	Limit [dB]	Measured value [dB]	Margin (Limit – Reading) [dB]
150 kHz – 160 kHz	28		
160 kHz – 1400 kHz	28 to 20 linear with logarithm		
1400 kHz – 1605 kHz	20		

Supplementary information:

N/A: Not applicable according Table D.1 and D.2

Graphical presentation of the result (if applicable)

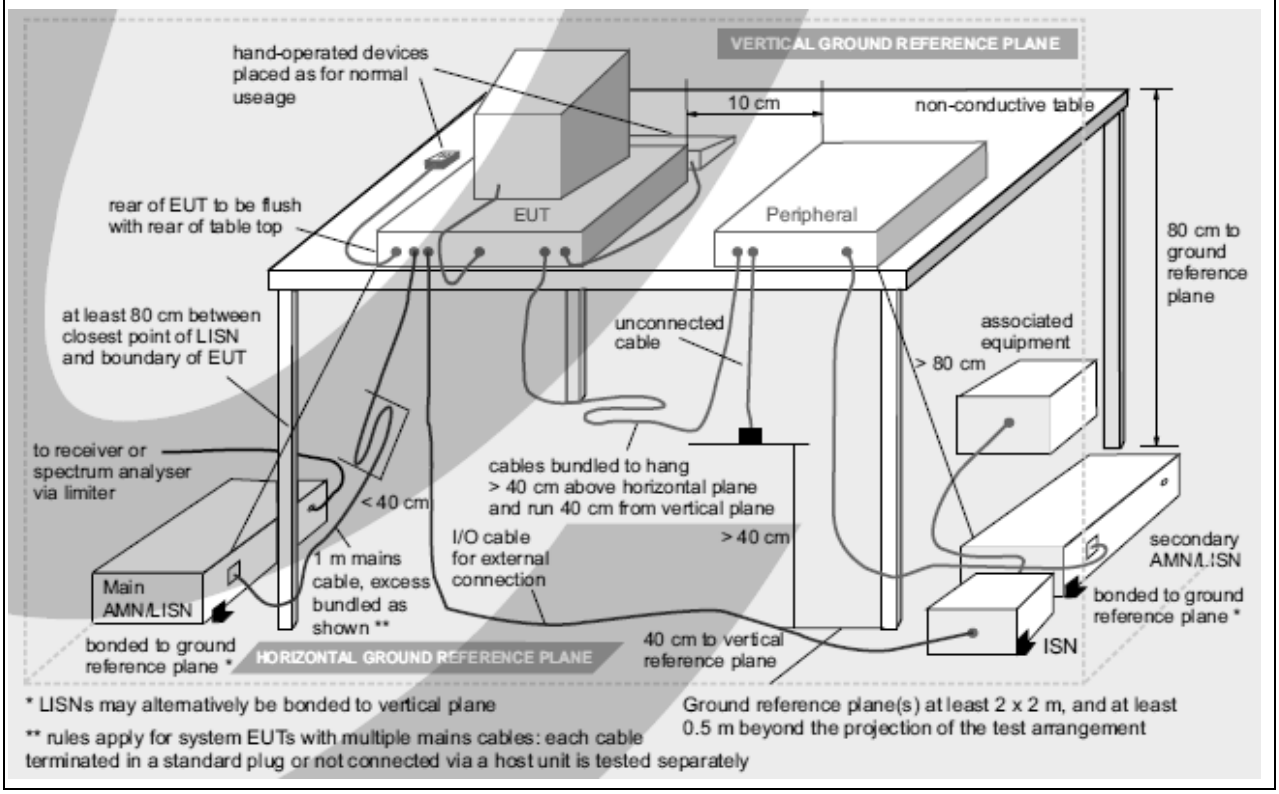
Supplementary information:

N/A: Not applicable according Table D.1 and D.2

4.2 Disturbance voltage

Tested by..... :	RBT	
Test date..... :	2015/12/02	
Test Location (stand)..... :	EMC Shielded Room, SGS Tecnos, Madrid, Spain	
Test set-up description ..... :	☒	Set-up Type A (40 cm distance to vertical ground plane, 80 cm or ground plane)
	☐	Set-up Type B (40 cm distance to horizontal ground plane)
	☐	Floor standing equipment set-up (10 cm over ground plane)
	☐	Other:
	☐	Artificial hand applied
Supplementary Test set-up description ..... :		
Test method applied..... :	☒	Artificial mains network
	☐	Artificial mains network used as voltage probe
	☐	Voltage probe
	☐	CDN according to IEC 61000-4-6
	☐	Current probe and capacitive voltage probe (CVP)
	☐	ISN
	☐	In situ CDN (150 Ohm and current probe)
	☐	Other:
Used mains voltage/frequency for the test. Evaluated at 160 kHz (0,9 – 1,1 of U_N)..... :	230 V~/ 50 Hz	
Supplementary information ..... :	According clause 8.1.4.1 the measures are performed at maximum and minimum luminosity regulation.	

Test set-up..... :	


VERTICAL GROUND REFERENCE PLANE
hand-operated devices placed as for normal useage
10 cm
non-conductive table
rear of EUT to be flush with rear of table top
EUT
Peripheral
80 cm to ground reference plane
at least 80 cm between closest point of LISN and boundary of EUT
unconnected cable
associated equipment
> 80 cm
to receiver or spectrum analyser via limiter
< 40 cm
cables bundled to hang > 40 cm above horizontal plane and run 40 cm from vertical plane
I/O cable for external connection
> 40 cm
secondary AMN/LISN
bonded to ground reference plane *
Main AMN/LISN
1 m mains cable, excess bundled as shown **
bonded to ground reference plane *
HORIZONTAL GROUND REFERENCE PLANE
40 cm to vertical reference plane
ISN
* LISNs may alternatively be bonded to vertical plane
** rules apply for system EUTs with multiple mains cables: each cable terminated in a standard plug or not connected via a host unit is tested separately
Ground reference plane(s) at least 2 x 2 m, and at least 0.5 m beyond the projection of the test arrangement

Operation mode	1
Port measured	Input AC
Mains voltage and frequency at which the test has been done	230 V~ / 50 Hz
Verdict	P (Pass)
Graphic Representation	Phase (PEAK / AVERAGE+/QUASIPEAK X) Quasipeak limit (red), Average limit (purple)

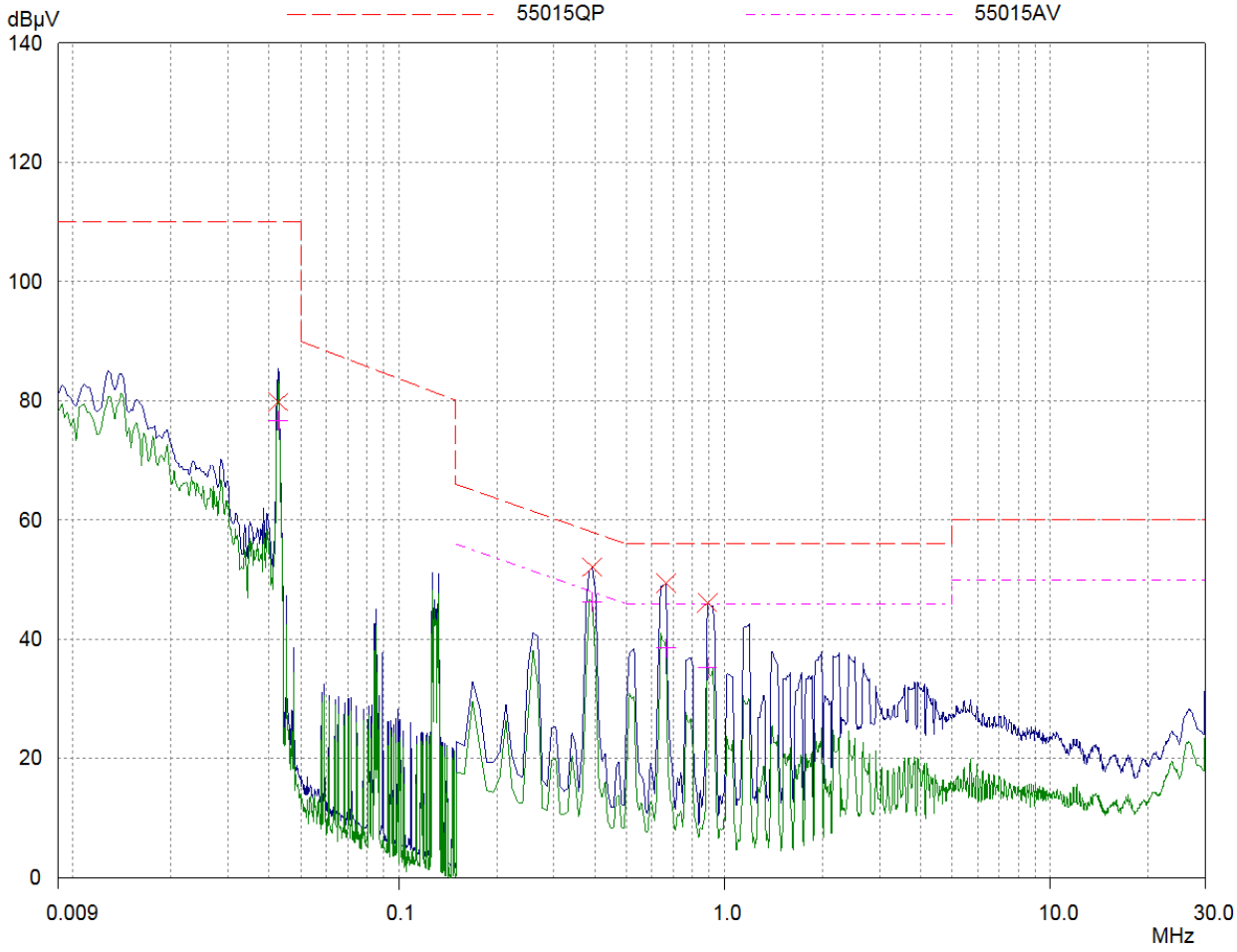
Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
9kHz	150kHz	200Hz	200Hz	QP+AV	50msec	Auto	60dB
150kHz	30MHz	9kHz	10kHz	QP+AV	50msec	Auto	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	ESH3Z2_

Final Measurement:

Detectors:	X QP / + AV
Meas Time:	1sec
Peaks:	16
Acc Margin:	5 dB



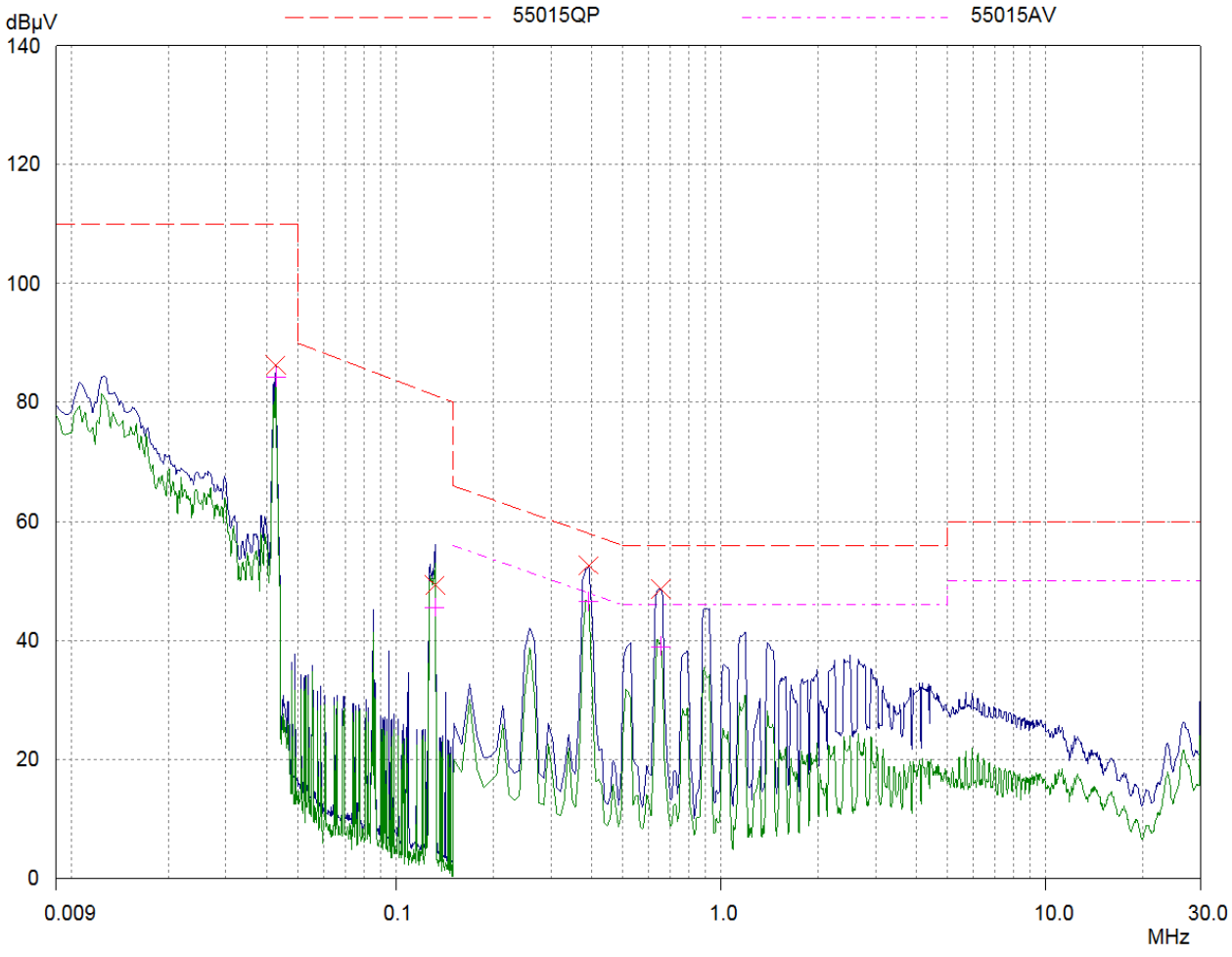
Operation mode	1
Port measured	Input AC
Mains voltage and frequency at which the test has been done	230 V~ / 50 Hz
Verdict	P (Pass)
Graphic Representation	Neutral (PEAK / AVERAGE+/QUASIPEAK X) Quasipeak limit (red), Average limit (purple)

Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
9kHz	150kHz	200Hz	200Hz	QP+AV	50msec	Auto	60dB
150kHz	30MHz	9kHz	10kHz	QP+AV	50msec	Auto	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	ESH3Z2_

Final Measurement:
Detectors: X QP / + AV
Meas Time: 1sec
Peaks: 16
Acc Margin: 5 dB



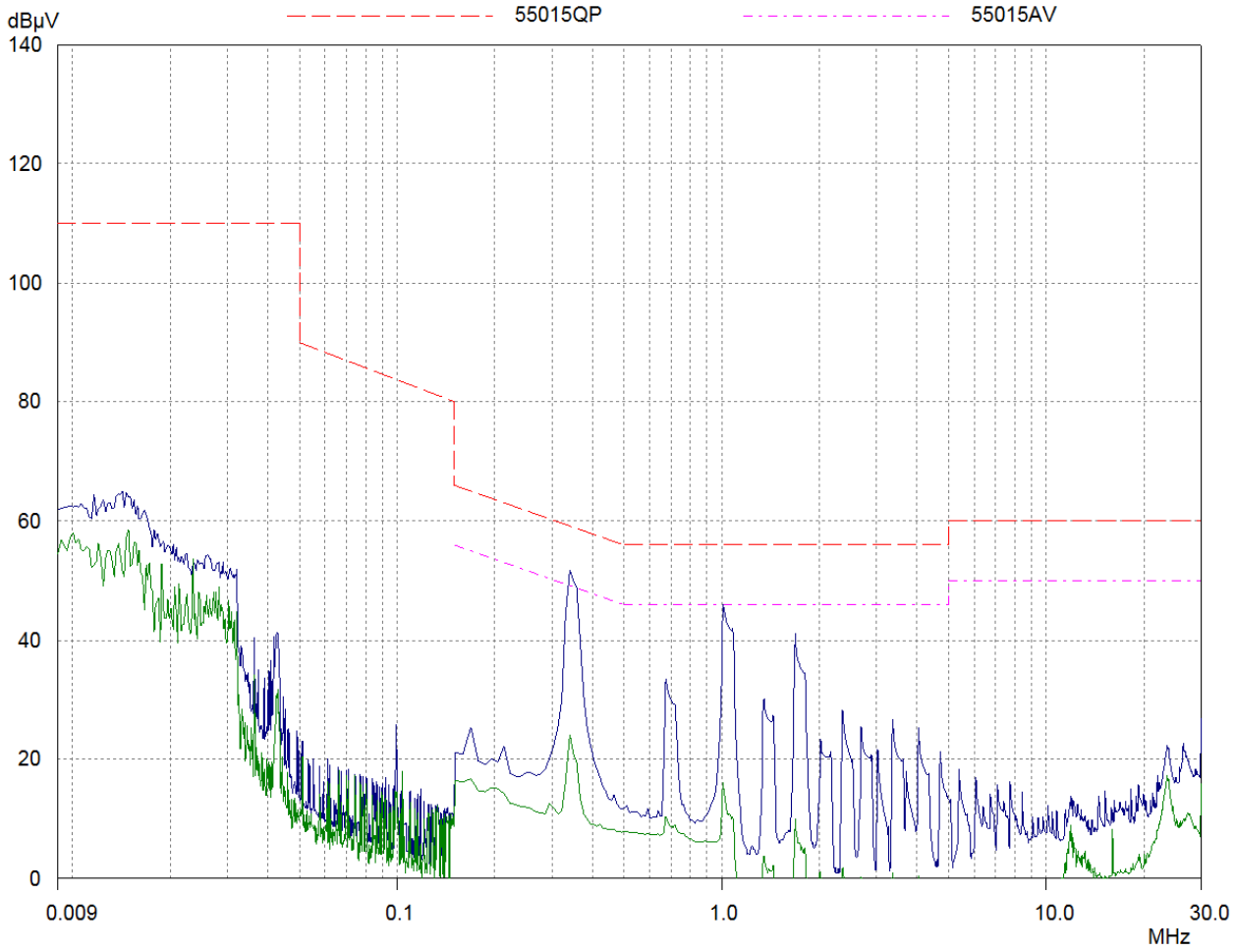
Operation mode	2
Port measured	Input AC
Mains voltage and frequency at which the test has been done	230 V~ / 50 Hz
Verdict	P (Pass)
Graphic Representation	Phase (PEAK / AVERAGE) Quasipeak limit (red), Average limit (purple)

Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
9kHz	150kHz	200Hz	200Hz	QP+AV	50msec	Auto	60dB
150kHz	30MHz	9kHz	10kHz	QP+AV	50msec	Auto	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	ESH3Z2_

Prescan Measurement:
Detectors: X QP / + AV
Meas Time: see scan settings
Peaks: 16
Acc Margin: 5 dB



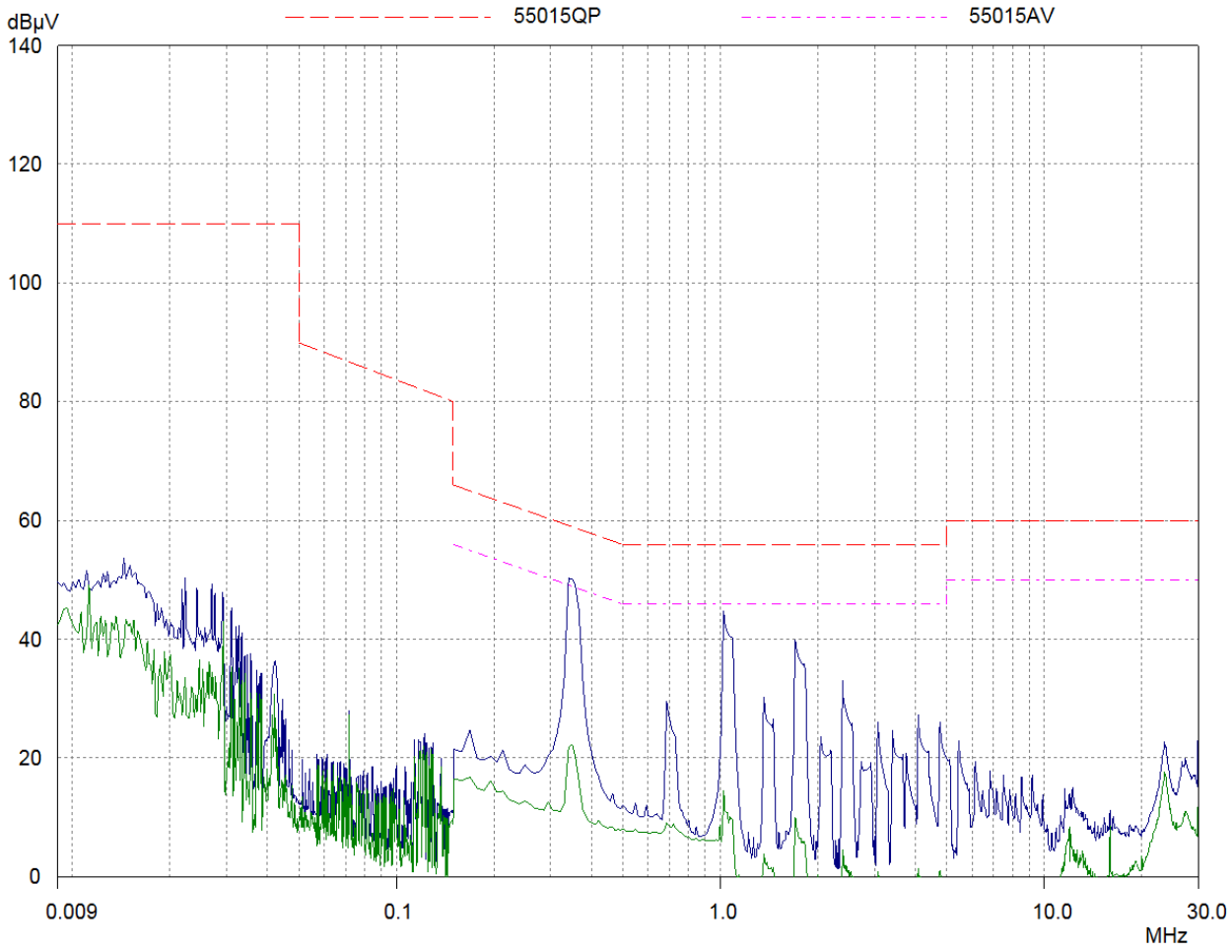
Operation mode	2
Port measured	Input AC
Mains voltage and frequency at which the test has been done	230 V~ / 50 Hz
Verdict	P (Pass)
Graphic Representation	Neutral (PEAK / AVERAGE) Quasipeak limit (red), Average limit (purple)

Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
9kHz	150kHz	200Hz	200Hz	QP+AV	50msec	Auto	60dB
150kHz	30MHz	9kHz	10kHz	QP+AV	50msec	Auto	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	ESH3Z2_

Prescan Measurement:
Detectors: X QP / + AV
Meas Time: see scan settings
Peaks: 16
Acc Margin: 5 dB



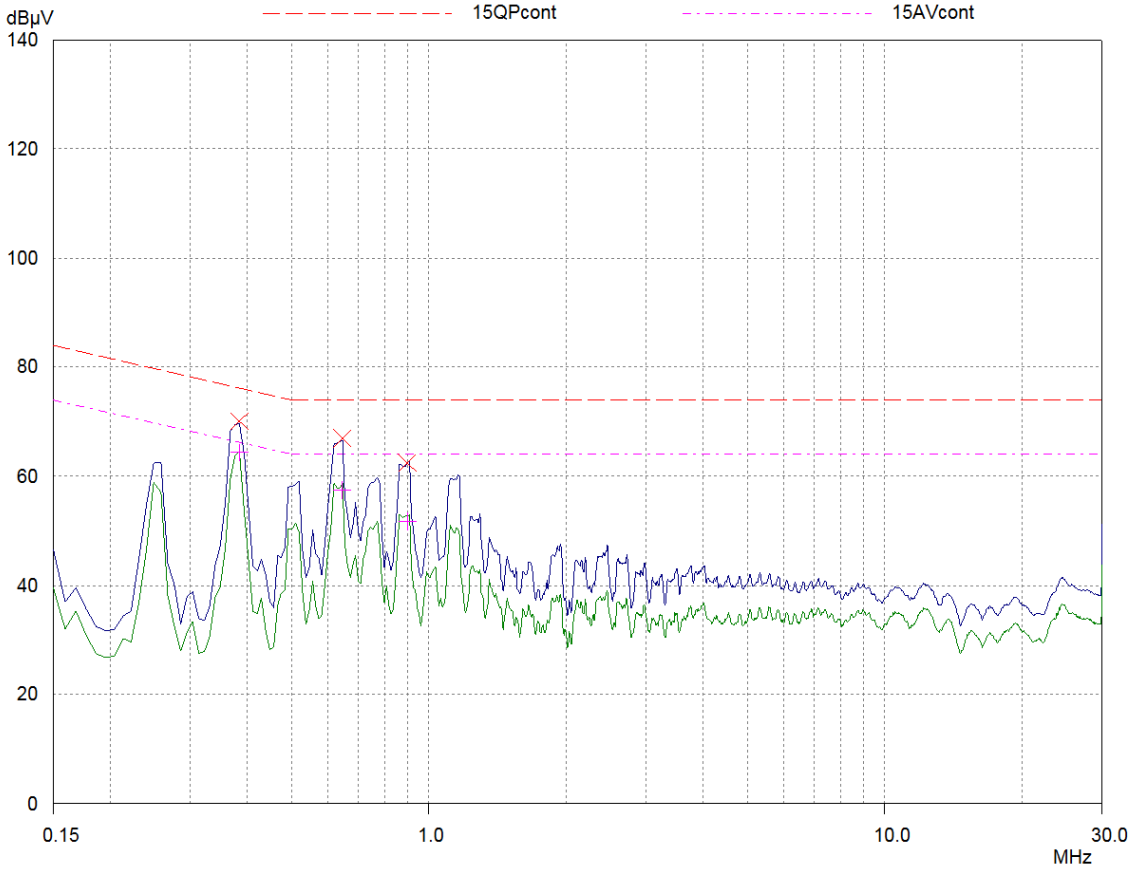
Operation mode	1
Port measured	Control lines
Mains voltage and frequency at which the test has been done	230 V~ / 50 Hz
Verdict	P (Pass)
Graphic Representation	Blue wire (PEAK / AVERAGE) Quasipeak limit (red), Average limit (purple)

Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
150kHz	30MHz	9kHz	10kHz	QP+AV	50msec	Auto	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	ESH3Z2_

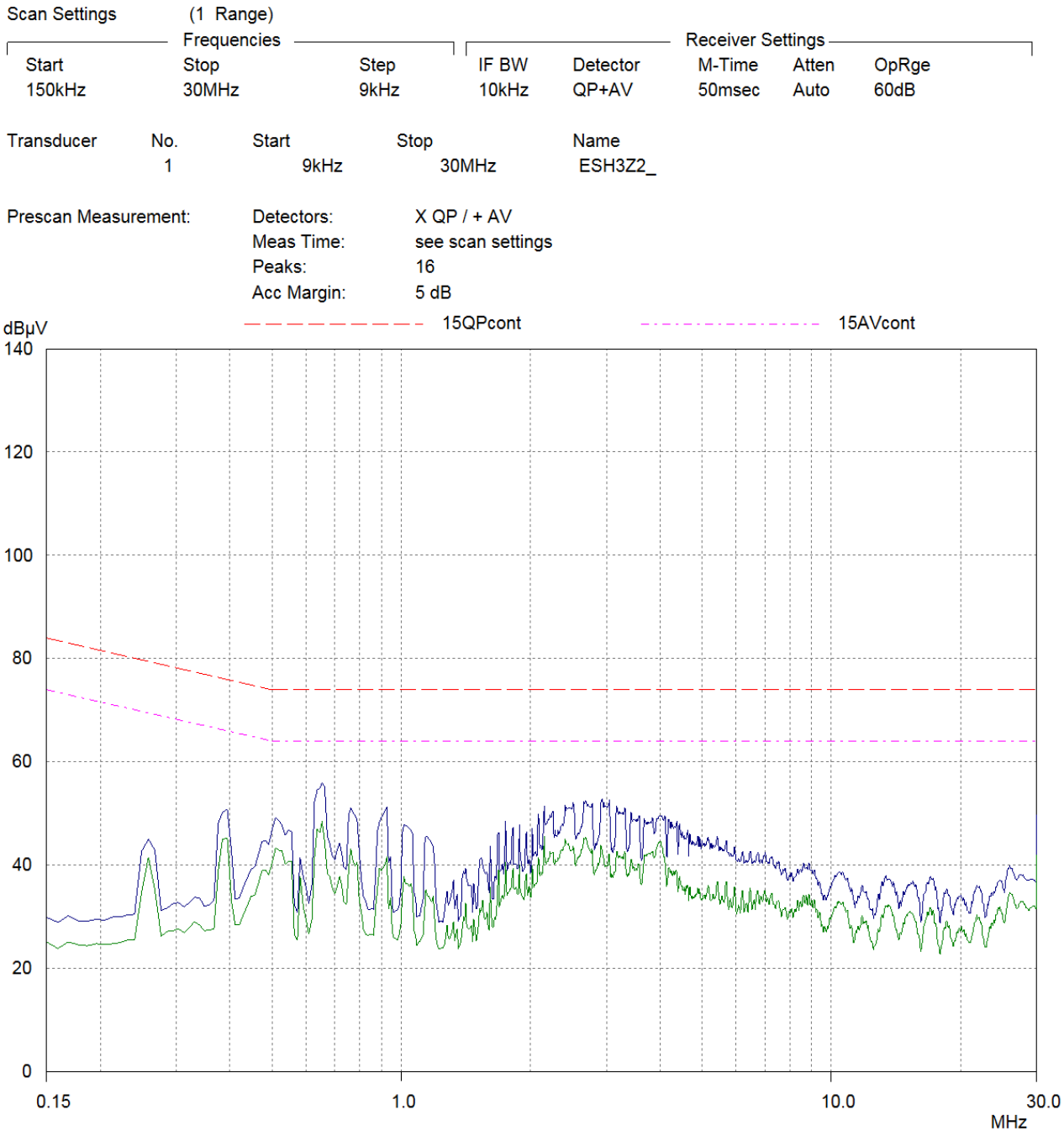
Final Measurement: Detectors: X QP / + AV
Meas Time: 1sec
Peaks: 16
Acc Margin: 5 dB



Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB
0.384	70.11	76.19	6.08	0.384	64.31	66.19	1.88
0.645	66.91	74.00	7.09	0.645	57.51	64.00	6.49
0.897	62.41	74.00	11.59	0.897	51.63	64.00	12.37

Operation mode	1
Port measured	Control lines
Mains voltage and frequency at which the test has been done	230 V~ / 50 Hz
Verdict	P (Pass)
Graphic Representation	White wire (PEAK / AVERAGE) Quasipeak limit (red), Average limit (purple)



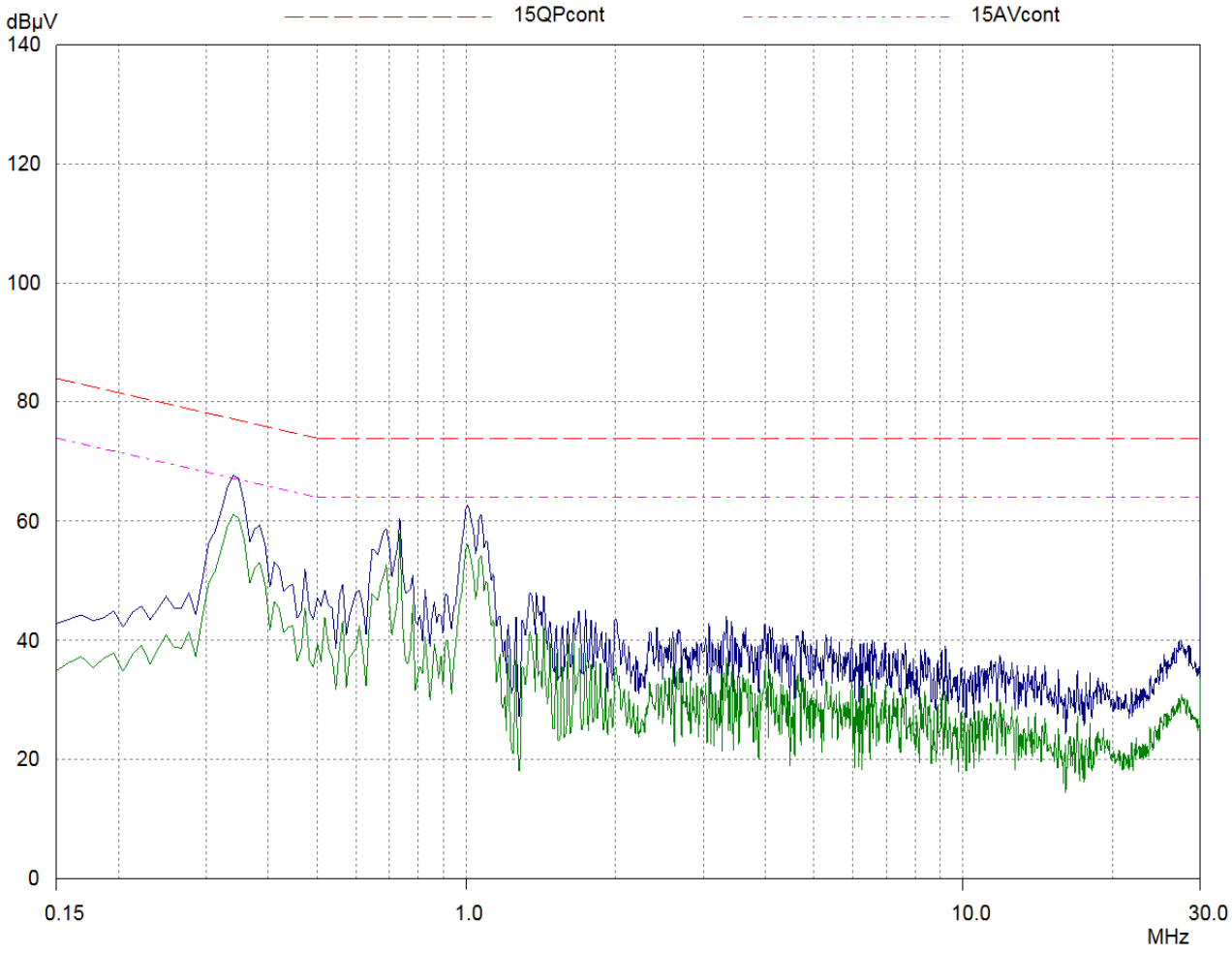
Operation mode	2
Port measured	Control lines
Mains voltage and frequency at which the test has been done	230 V~ / 50 Hz
Verdict	P (Pass)
Graphic Representation	Blue wire (PEAK / AVERAGE) Quasipeak limit (red), Average limit (purple)

Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
150kHz	30MHz	9kHz	10kHz	PK+AV	2msec	Auto	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	ESH3Z2_

Prescan Measurement:
Detectors: X PK / + AV
Meas Time: see scan settings
Peaks: 16
Acc Margin: 5 dB



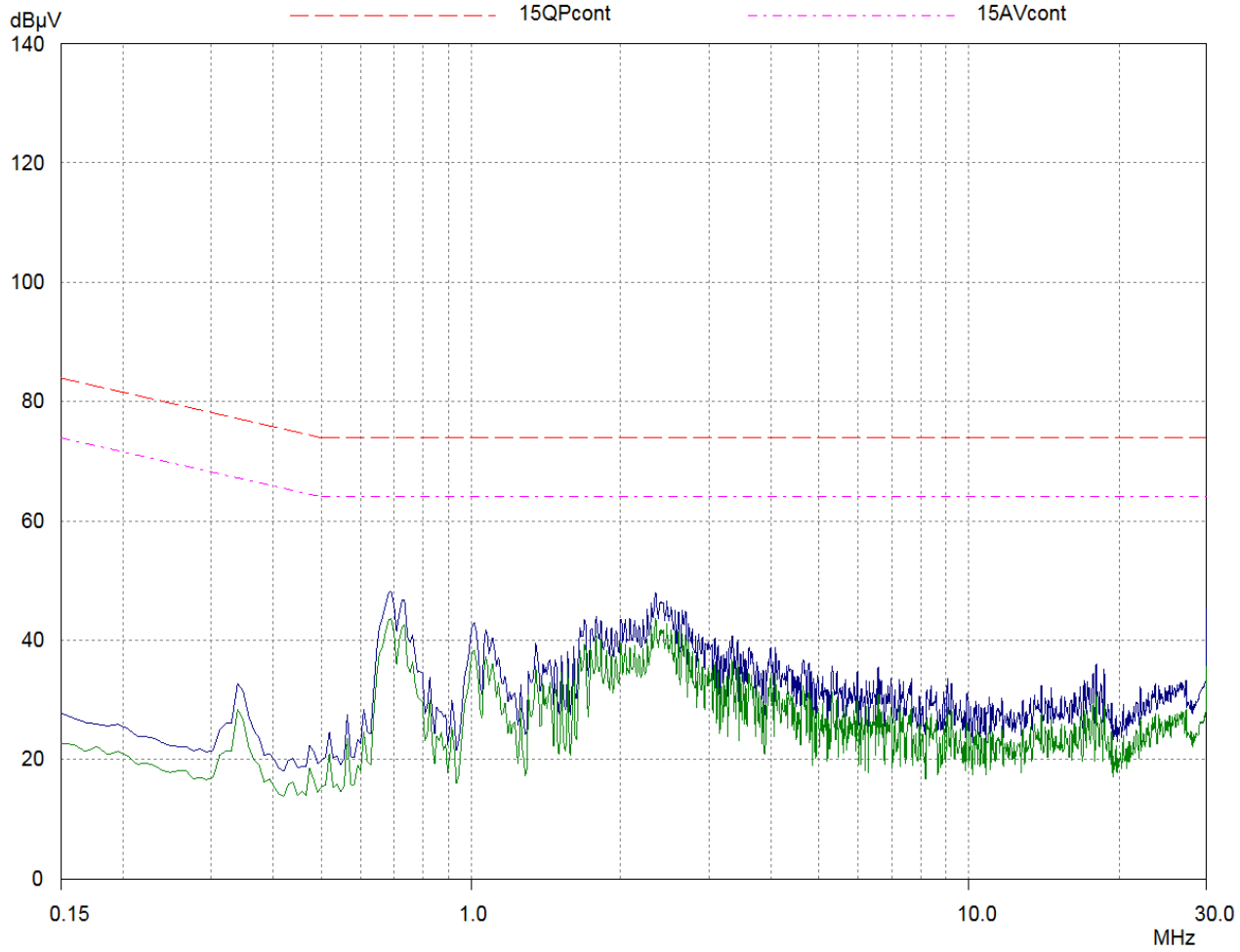
Operation mode	2
Port measured	Control lines
Mains voltage and frequency at which the test has been done	230 V~ / 50 Hz
Verdict	P (Pass)
Graphic Representation	White wire (PEAK / AVERAGE) Quasipeak limit (red), Average limit (purple)

Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
150kHz	30MHz	9kHz	10kHz	QP+AV	20msec	Auto	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	ESH3Z2_

Prescan Measurement:	Detectors:	X QP / + AV
	Meas Time:	see scan settings
	Peaks:	16
	Acc Margin:	5 dB



4.3 Radiated electromagnetic disturbances (9 kHz to 30 MHz)

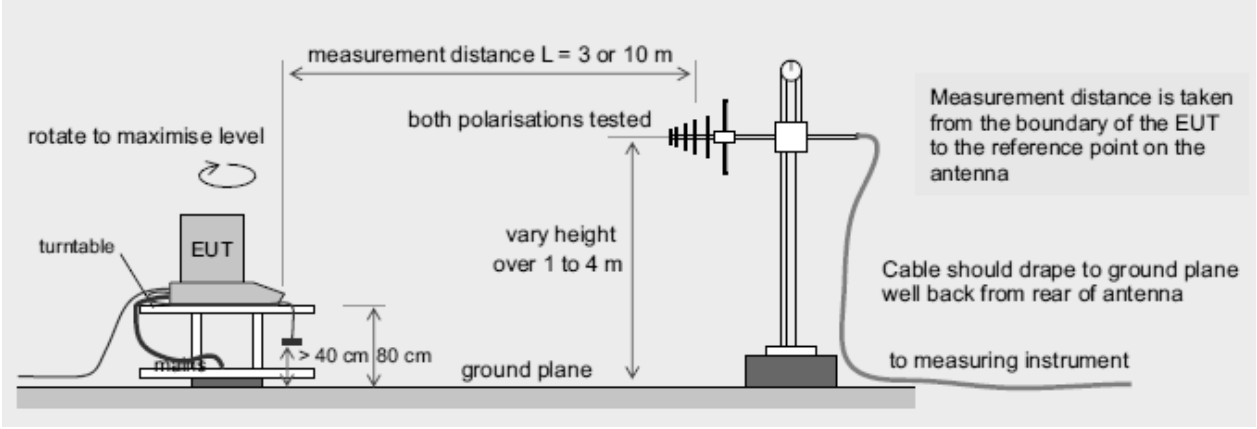
Tested by..... :		
Test date..... :		
Test Location (stand)..... :		
Applied limit according to loop antenna diameter ..... :	☐	2m for equipment length not exceeding 1,6m
	☐	3m for equipment length between 1,6 m and 2,6 m
	☐	4m for equipment length between 2,6 m and 3,6 m
Test set-up description ..... :	☒	Equipment placed in the centre of the LLA
	☐	Other:
Supplementary test set-up description ..... :	---	
Test method applied..... :	☒	Large Loop Antenna
	☐	Other:
Supplementary information ..... :	N/P: - test does not performed by laboratory limitation	

Test set-up photo ..... :	

4.4 Radiated electromagnetic disturbances, Antenna or CDN(E) (30 MHz to 300 MHz)

Tested by..... :	RBT	
Test date..... :	2015/12/02 to 2015/12/04	
Test Location (stand)..... :	EMC Shielded Room, SGS Tecnos, Madrid, Spain	
Applied limit class..... :	☒	Table 3b Radiated disturbance limits
	☐	Table B.1 Common mode terminal voltage, CDN method
	☐	Other:
Test set-up description ..... :	☒	Equipment on a table of 80 cm height
	☐	Equipment on the floor (insulated from ground plane)
	☐	Equipment on a 10 cm support over the ground plane according CISPR 15 Annex B
	☐	Other:
Supplementary test set-up description ..... :	---	
Test method applied..... :	☒	OATS or SAC with measurement distance [m]: 3 m (**)
	☐	FAR with measurement distance [m]:
	☐	TEM Waveguide
	☐	CDN(E) according to CISPR 15 Annex B
Supplementary information ..... :	**(*) Test outside the scope of accreditation ENAC Nº 5/LE011** (**)The measurements corresponding to this test, have been performed at 3 meters of distance and the applied limits have been corrected according to the indications of clause 10.8 of the Standard EN 55022 where the following relation is indicated: L2=L1 (d1/d2) where *dn* is a distance in meters and *Ln* is the limit in mV/m. Top side of the EUT result the most vulnerable. According clause 9.1.4 the measures are performed at maximum and minimum luminosity regulation.	

Test set-up..... :	



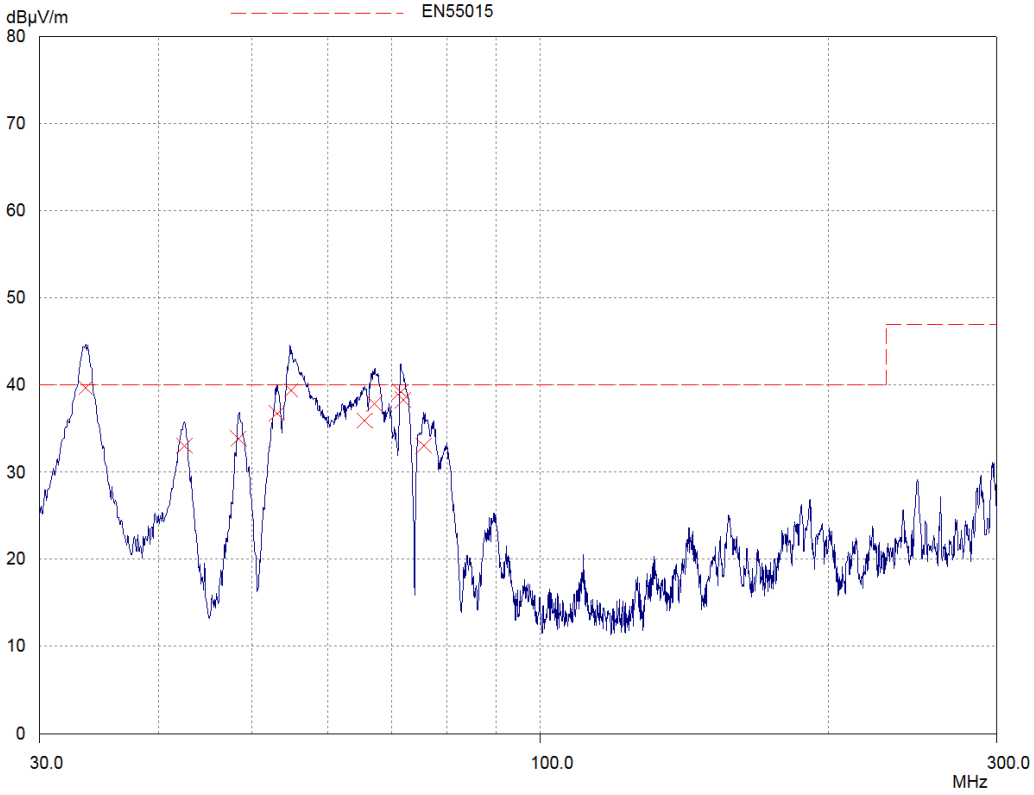
Operation mode	1
Port measured	Enclosure
Mains voltage and frequency at which the test has been done	230V / 50Hz
Verdict	P (Pass) (*)
Graphic Representation	Vertical polarization
(*) Test outside the scope of accreditation ENAC Nº 5/LE011	

Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
30MHz	230MHz	100kHz	120kHz	PK	10msec	0 dB	60dB
230MHz	300MHz	100kHz	120kHz	PK	10msec	0 dB	60dB

Transducer	No.	Start	Stop	Name
	21	30MHz	1000MHz	DB2yLOG3m

Final Measurement:
Detector: X QP
Meas Time: 1sec
Subranges: 16
Acc Margin: 10 dB



Final Measurement Results

Frequency MHz	QP Level dBµV/m	QP Limit dBµV/m
33.5	39.83	40.00
42.5	33.02	40.00
48.4	33.84	40.00
53.1	36.74	40.00
54.8	39.36	40.00
65.59999	35.93	40.00
67.09999	37.83	40.00
71.5	39.21	40.00
71.9	38.26	40.00
75.6	33.03	40.00

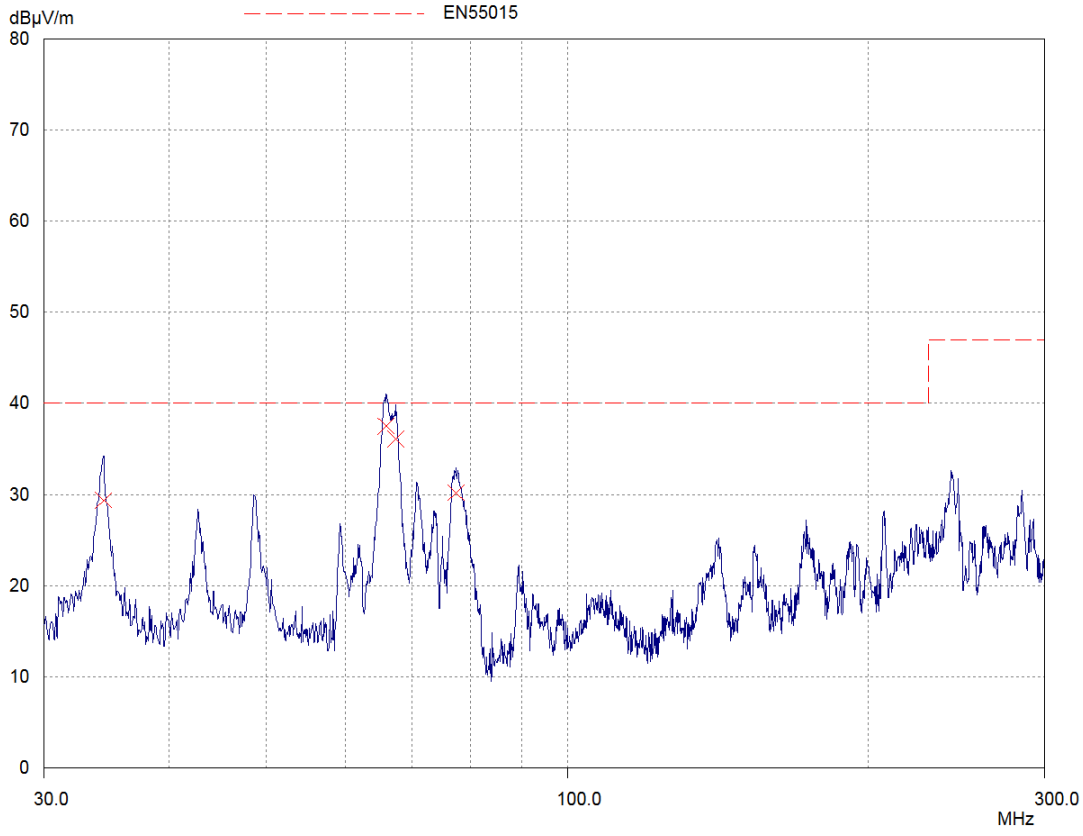
Operation mode	1
Port measured	Enclosure
Mains voltage and frequency at which the test has been done	230V / 50Hz
Verdict	P (Pass) (*)
Graphic Representation	Horizontal polarization
(*) Test outside the scope of accreditation ENAC Nº 5/LE011	

Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
30MHz	230MHz	100kHz	120kHz	PK	10msec	0 dB	60dB
230MHz	300MHz	100kHz	120kHz	PK	10msec	0 dB	60dB

Transducer	No.	Start	Stop	Name
	21	30MHz	1000MHz	DB2yLOG3m

Final Measurement: Detector: X QP
Meas Time: 1sec
Subranges: 16
Acc Margin: 10 dB



Final Measurement Results

Frequency MHz	QP Level dBµV/m	QP Limit dBµV/m
34.4	29.36	40.00
65.9	37.52	40.00
67.4	36.11	40.00
77.4	30.18	40.00

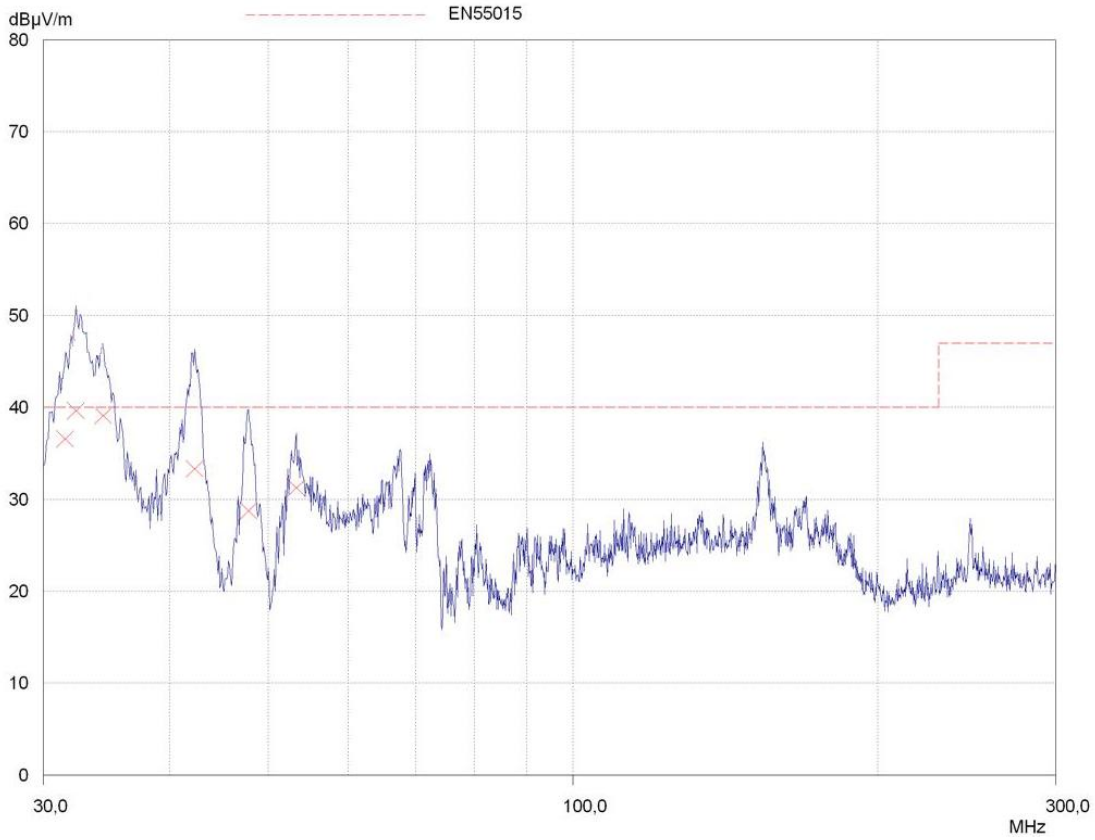
Operation mode	2
Port measured	Enclosure
Mains voltage and frequency at which the test has been done	230V / 50Hz
Verdict	P (Pass) (*)
Graphic Representation	Vertical polarization
(*) Test outside the scope of accreditation ENAC Nº 5/LE011	

Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
30MHz	300MHz	100kHz	120kHz	PK	20msec	0 dB	60dB

Transducer	No.	Start	Stop	Name
	21	25MHz	1000MHz	SAS_3m

Final Measurement:
Detector: X QP
Meas Time: 5sec
Subranges: 16
Acc Margin: 10 dB



Final Measurement Results

Frequency MHz	QP Level dBµV/m	QP Limit dBµV/m	QP Delta dB
31,5	36,57	40,00	3,43
33,1	39,43	40,00	0,57
34,2	39,11	40,00	0,89
42,3	33,29	40,00	6,71
47,8	28,74	40,00	11,26
53,3	31,25	40,00	8,75

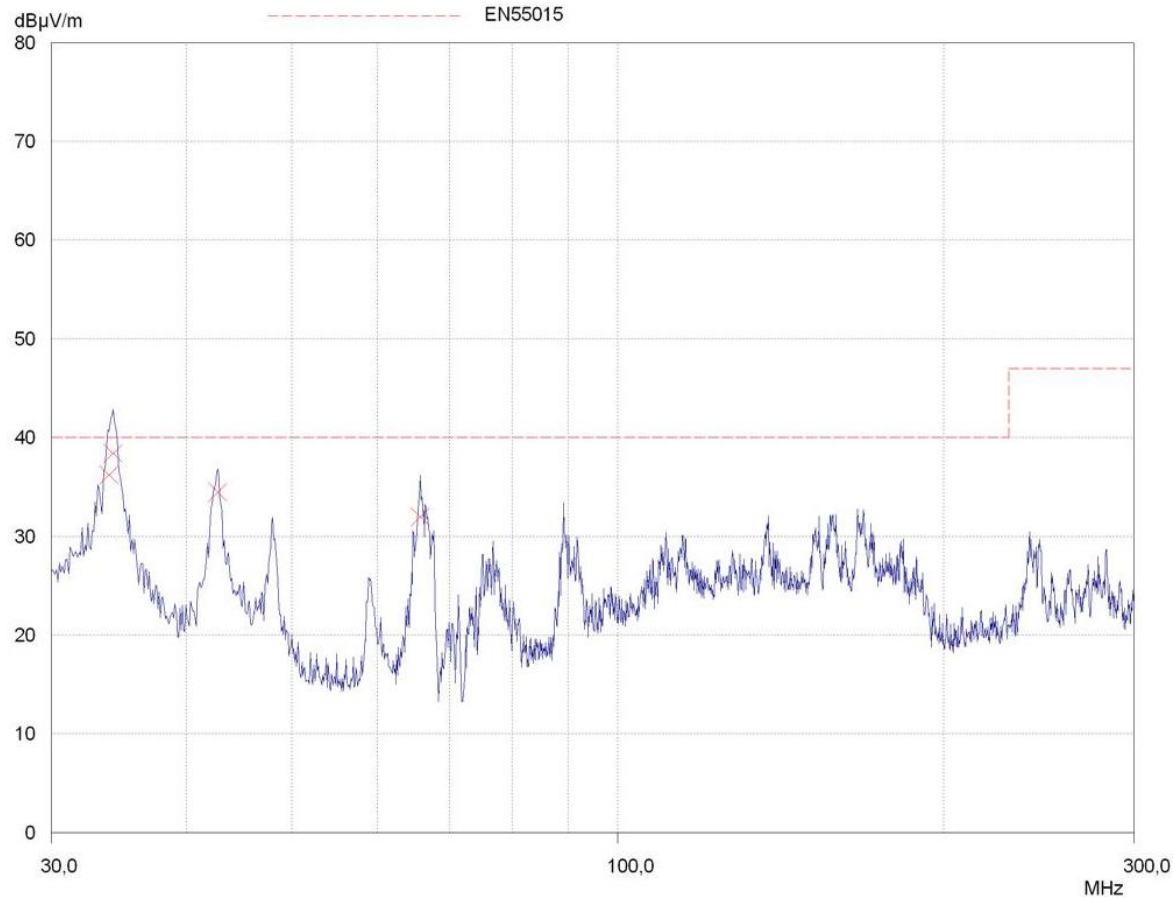
Operation mode	2
Port measured	Enclosure
Mains voltage and frequency at which the test has been done	230V / 50Hz
Verdict	P (Pass) (*)
Graphic Representation	Horizontal polarization
(*) Test outside the scope of accreditation ENAC Nº 5/LE011	

Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	OpRge
30MHz	300MHz	100kHz	120kHz	PK	20msec	0 dB	60dB

Transducer	No.	Start	Stop	Name
	21	25MHz	1000MHz	SAS_3m

Final Measurement: Detector: X QP
Meas Time: 5sec
Subranges: 16
Acc Margin: 10 dB



Final Measurement Results

Frequency MHz	QP Level dBµV/m	QP Limit dBµV/m	QP Delt dB
33,9	36,18	40,00	3,82
34,2	38,37	40,00	1,63
42,7	34,47	40,00	5,53
65,7	31,97	40,00	8,03

5 Harmonic current emissions

Tested by..... :	RBT		
Test date..... :	2015/12/07, 2015/12/15 & 2015/12/16		
Test Location (stand)..... :	EMC Shielded Room, SGS Tecnos, Madrid, Spain		
Test set-up description ..... :	--		
Operating modes of EUT..... :	1, 3, 5, 6 & 7 (****)		
Limit classification in accordance with the standard ..... :	☐	Class A	
	☐	Class B	
	☒	Class C with active input power > 25 W	
	☐	Class C with active input power ≤ 25 W (First requirement, Table 3 column 2)	
	☐	Class C with active input power ≤ 25 W (Second requirement)	
	☐	Class D	
Observation period ..... :	Description		Period selected T_{obs}
	☒	Quasi stationary	2.5 min
	☐	Short cyclic	T_{obs} ≥ 10 cycles =
	☐	Random	T_{obs} =
	☐	Long cyclic	Full program cycle or 2.5 min. with highest THC T_{obs} =
Version of measurement instrument standard used IEC 61000-4-7 (Clause 7) ..... :	☐	IEC 61000-4-7 (ed. 1)	
	☒	IEC 61000-4-7 (ed. 2) + am1	
Control principle used in the sample ..... :	---		
Supplementary information ..... :	(****) According to manufacturer specifications to perform the Harmonic current emission test the luminosity regulation is performed between 30 kΩ and 100 kΩ. According manufacturer specifications the minimum regulation value used in normal performance is 30 kΩ In the graphic representation of the test below: 0% = minimum luminosity (30 kΩ) 25% = 47,5 kΩ 50% = 65 kΩ 75% = 82,5 kΩ 100% = maximum luminosity (100 kΩ)		

Operation mode	3
Port measured	Input AC
Mains voltage and frequency at which the test has been done	230 Vac 50 Hz
Verdict	P

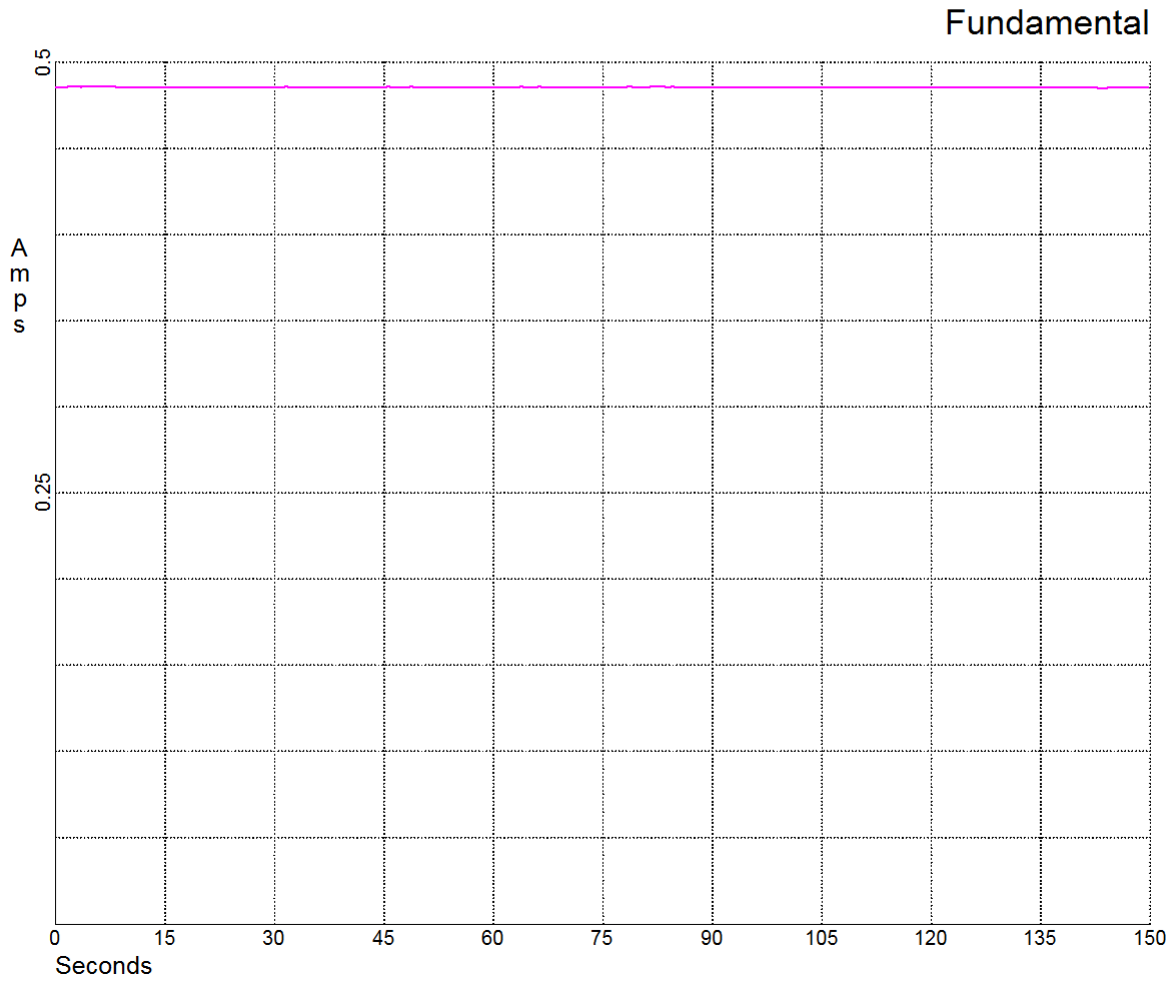
Product:	PROYECTOR LED	17 Dec 2015 10:42
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 0% 2415/1062 RBT GIPUZKOALED/CMP215VE29C	
Test Date:	15 Dec 2015 15:10	
Result Name:	GIPUZKOALED/CMP215VE	
Type of Test:	EN61000:2001 Harmonics	
Limits:	Class C > 25W	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	

Harmonic Results Against Chosen Limits:

PASS

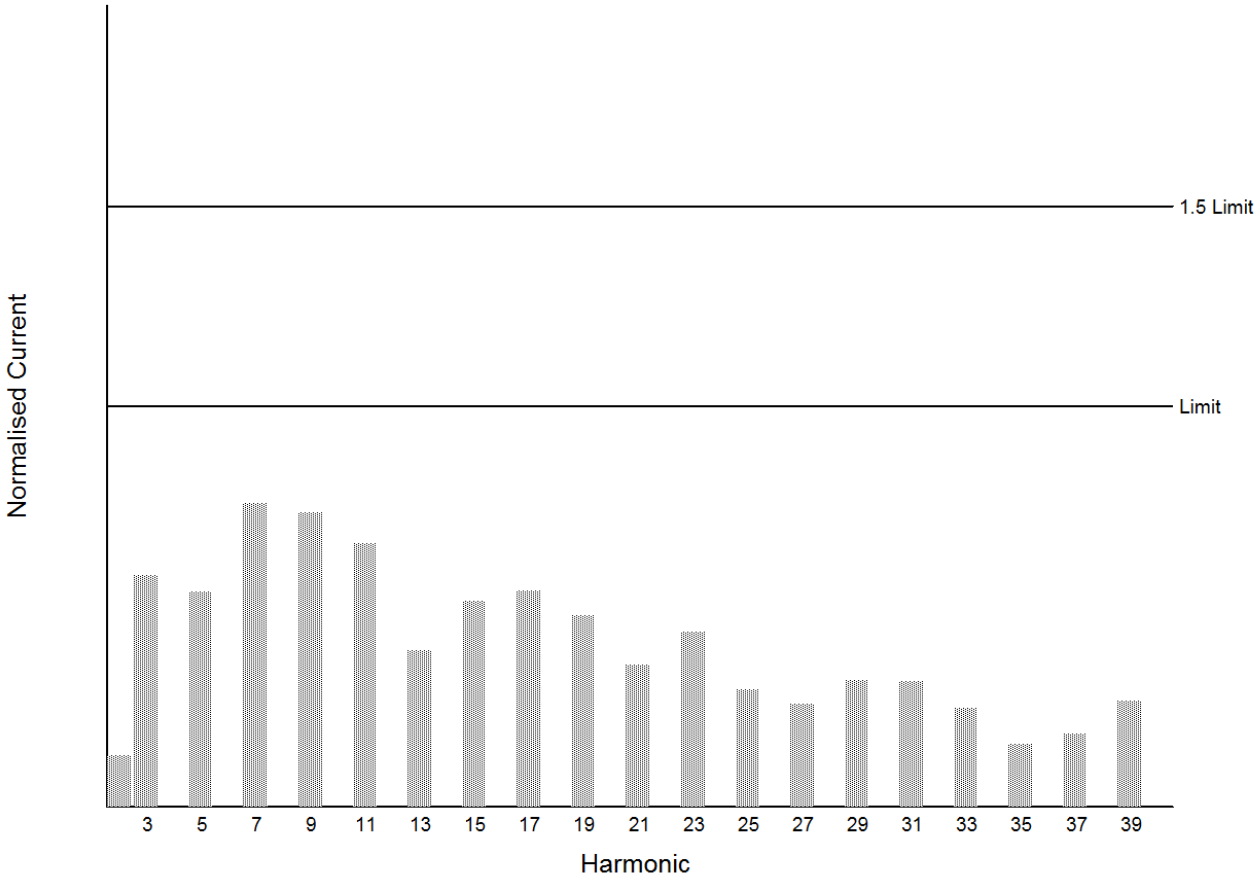
Test Parameter Details	**User Entered**	**Measured**
Operating Frequency:	50	49.9922
Operating Voltage:	230	228.2191
Specified Power:	20.0000	103.9180
Fundamental Current:	0.4900	0.4863
Power Factor:	0.9190	0.9122
Average Input Current:		0.4942
Maximum POHC:		0.0126
POHC Limit:		0.0465
Maximum THC:		0.0905
Minimum Power:	75	
Class Multiplier:	1.0000	
Test Duration:	00:02:30	

Product:	PROYECTOR LED	17 Dec 2015 10:42 Page 1 of 1
Serial no:	--	
Description:	OPERATIVO AL 0% 2415/1062 RBT GIPUZKOALED/CMP215VE29C	
Result Name:	GIPUZKOALED/CMP215VE	
Voltech IEC1000-3 Windows Software 3.11.07	Test Date: 15 Dec 2015 15:10	
Type of Test:	Fluctuating Harmonics Test - Single Harmonic Plot (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		



Product:	PROYECTOR LED	17 Dec 2015 10:42 Page 1 of 1
Serial no:	--	
Description:	OPERATIVO AL 0% 2415/1062 RBT GIPUZKOALED/CMP215VE29C	
Result Name:	GIPUZKOALED/CMP215VE	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 15 Dec 2015 15:10
Type of Test:	Fluctuating Harmonics Test - Normalised Worst Case Bar Chart (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		

Class	Class C > 25W
Class Multiplier	1



Product:	PROYECTOR LED	17 Dec 2015 10:42
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 0% 2415/1062 RBT GIPUZKOALED/CMP215VE29C	
Result Name:	GIPUZKOALED/CMP215VE	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 15 Dec 2015 15:10
Type of Test:	Fluctuating Harmonics Test - Source Qualification (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		

	Nominal	Measured	Deviation	Allowed Deviation	Result
Supply Voltage	230.00V	228.22V	1.78V	4.60V	Pass
Supply Frequency	50.00Hz	49.99Hz	0.01Hz	0.25Hz	Pass

Harmonic	Reading	Limit	Result	Harmonic	Reading	Limit	Result
2	0.03%	0.20%	Pass	3	0.03%	0.90%	Pass
4	0.03%	0.20%	Pass	5	0.03%	0.40%	Pass
6	0.03%	0.20%	Pass	7	0.03%	0.30%	Pass
8	0.03%	0.20%	Pass	9	0.03%	0.20%	Pass
10	0.03%	0.20%	Pass	11	0.03%	0.10%	Pass
12	0.03%	0.10%	Pass	13	0.03%	0.10%	Pass
14	0.03%	0.10%	Pass	15	0.03%	0.10%	Pass
16	0.03%	0.10%	Pass	17	0.03%	0.10%	Pass
18	0.03%	0.10%	Pass	19	0.03%	0.10%	Pass
20	0.03%	0.10%	Pass	21	0.03%	0.10%	Pass
22	0.03%	0.10%	Pass	23	0.03%	0.10%	Pass
24	0.03%	0.10%	Pass	25	0.03%	0.10%	Pass
26	0.03%	0.10%	Pass	27	0.03%	0.10%	Pass
28	0.03%	0.10%	Pass	29	0.03%	0.10%	Pass
30	0.03%	0.10%	Pass	31	0.03%	0.10%	Pass
32	0.03%	0.10%	Pass	33	0.03%	0.10%	Pass
34	0.03%	0.10%	Pass	35	0.03%	0.10%	Pass
36	0.03%	0.10%	Pass	37	0.03%	0.10%	Pass
38	0.03%	0.10%	Pass	39	0.03%	0.10%	Pass
40	0.03%	0.10%	Pass				

Product:	PROYECTOR LED	17 Dec 2015 10:42
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 0% 2415/1062 RBT GIPUZKOALED/CMP215VE29C	
Result Name:	GIPUZKOALED/CMP215VE	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 15 Dec 2015 15:10
Type of Test:	Fluctuating Harmonics Test - Worst Case Table (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result:		

PASS

Class	Class C > 25W
Class Multiplier	1

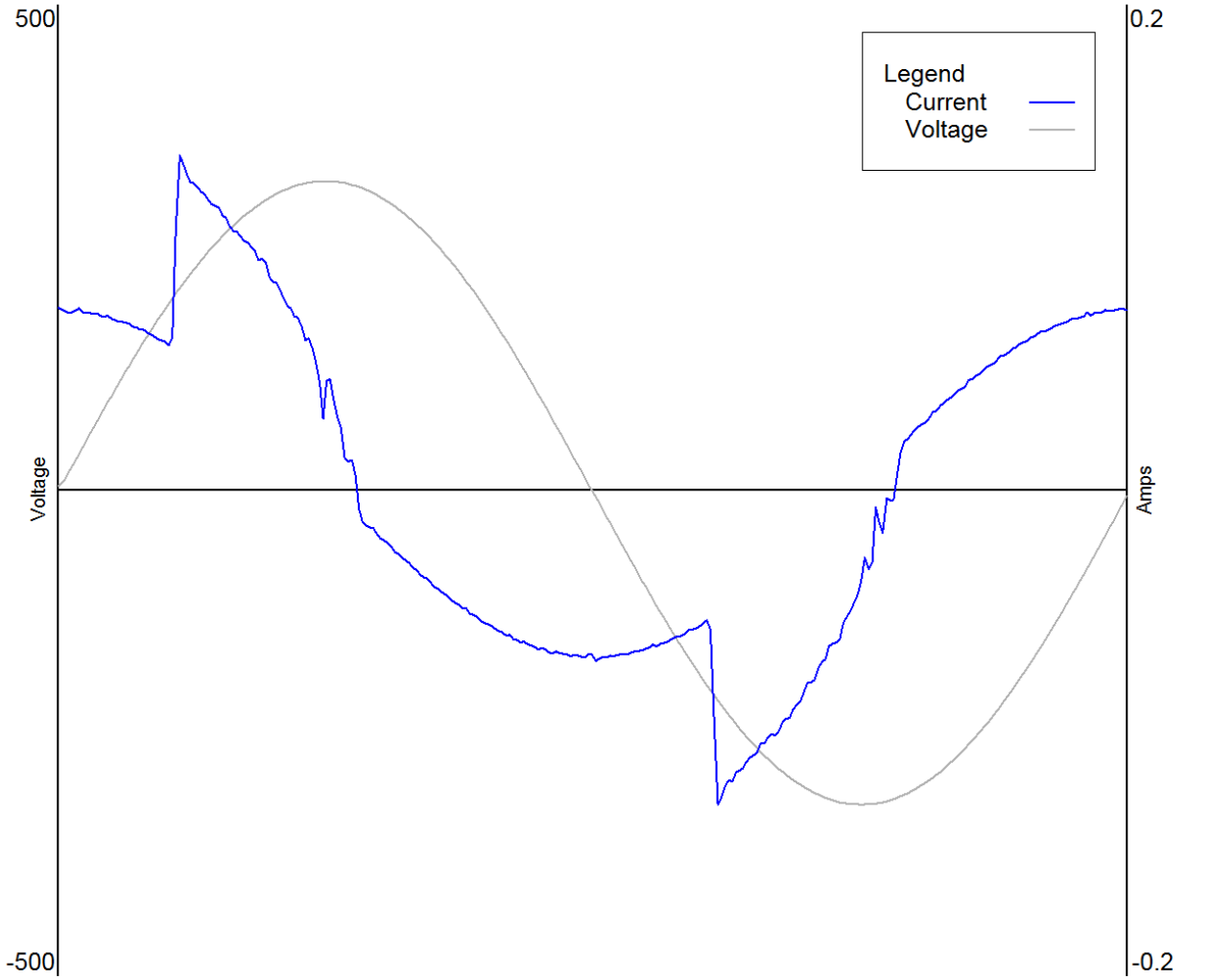
Harm	Limit 1	Limit 2	Average Reading	<L1	<L2	Max Reading	<L2	Pass FAIL	Harm	Limit 1	Limit 2	Average Reading	<L1	<L2	Max Reading	<L2	Pass FAIL
2	9.800mA	14.70mA	0.898mA	✓	✓	1.265mA	✓	N/A	3	135.0mA	202.6mA	77.70mA	✓	✓	78.22mA	✓	Pass
4	None	None	0.694mA			0.909mA		N/A	5	49.00mA	73.50mA	25.91mA	✓	✓	26.30mA	✓	Pass
6	None	None	0.705mA			1.091mA		N/A	7	34.29mA	51.45mA	25.66mA	✓	✓	26.02mA	✓	Pass
8	None	None	0.716mA			0.945mA		N/A	9	24.50mA	36.75mA	17.62mA	✓	✓	18.03mA	✓	Pass
10	None	None	0.633mA			0.972mA		N/A	11	14.70mA	22.05mA	9.195mA	✓	✓	9.663mA	✓	Pass
12	None	None	0.633mA			0.858mA		N/A	13	14.70mA	22.05mA	5.260mA	✓	✓	5.758mA	✓	Pass
14	None	None	0.588mA			0.849mA		N/A	15	14.70mA	22.05mA	7.264mA	✓	✓	7.563mA	✓	Pass
16	None	None	0.627mA			0.854mA		N/A	17	14.70mA	22.05mA	7.431mA	✓	✓	7.919mA	✓	Pass
18	None	None	0.551mA			0.857mA		N/A	19	14.70mA	22.05mA	6.455mA	✓	✓	7.032mA	✓	Pass
20	None	None	0.580mA			0.942mA		N/A	21	14.70mA	22.05mA	4.870mA	✓	✓	5.218mA	✓	N/A
22	None	None	0.529mA			0.853mA		N/A	23	14.70mA	22.05mA	5.913mA	✓	✓	6.425mA	✓	Pass
24	None	None	0.516mA			0.730mA		N/A	25	14.70mA	22.05mA	3.815mA	✓	✓	4.332mA	✓	N/A
26	None	None	0.513mA			0.762mA		N/A	27	14.70mA	22.05mA	3.581mA	✓	✓	3.773mA	✓	N/A
28	None	None	0.444mA			0.692mA		N/A	29	14.70mA	22.05mA	4.182mA	✓	✓	4.651mA	✓	N/A
30	None	None	0.476mA			0.654mA		N/A	31	14.70mA	22.05mA	4.381mA	✓	✓	4.604mA	✓	N/A
32	None	None	0.446mA			0.601mA		N/A	33	14.70mA	22.05mA	3.398mA	✓	✓	3.637mA	✓	N/A
34	None	None	0.421mA			0.602mA		N/A	35	14.70mA	22.05mA	1.947mA	✓	✓	2.330mA	✓	N/A
36	None	None	0.476mA			0.780mA		N/A	37	14.70mA	22.05mA	2.088mA	✓	✓	2.678mA	✓	N/A
38	None	None	0.479mA			0.600mA		N/A	39	14.70mA	22.05mA	3.436mA	✓	✓	3.894mA	✓	N/A
40	None	None	0.488mA			0.666mA		N/A									

<L1 : Reading is below limit 1.

<L2 : Reading is below limit 2.

N/A : Harmonic current below 0.6% of rated current or 5mA, whichever is greater, are disregarded.

Product:	PROYECTOR LED	17 Dec 2015 10:54
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 0% 2415/1062 RBT GIPUZKOA LED/CMP.215.VE.29.C	
Result Name:	GIPUZKOALED/CMP215VE	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 07 Dec 2015 09:57
Type of Test:	Waveform	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	



Operation mode	6
Port measured	Input AC
Mains voltage and frequency at which the test has been done	230 Vac 50 Hz
Verdict	P

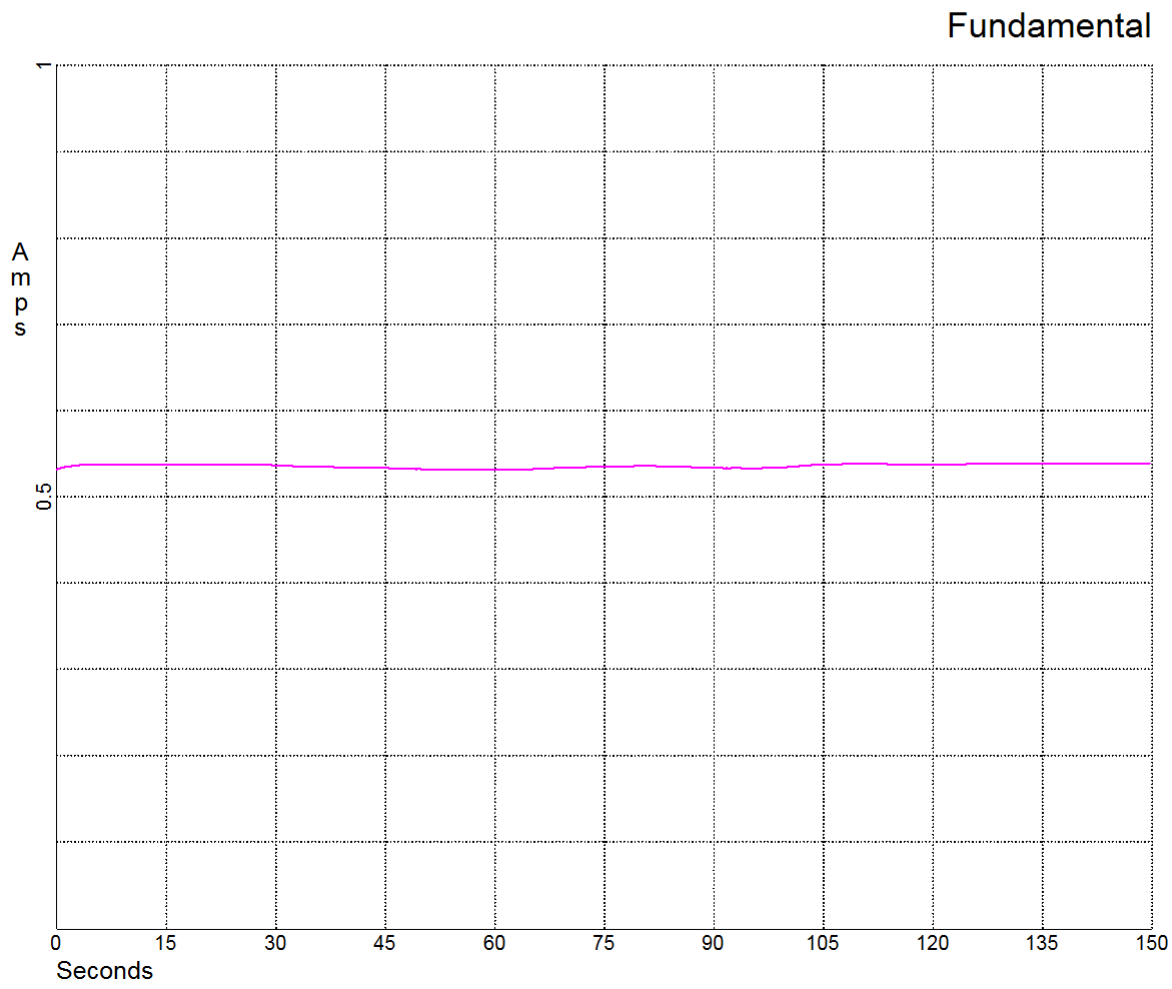
Product:	PROYECTOR LED	17 Dec 2015 10:43
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 25% 2415/1062 RBT	
Test Date:	16 Dec 2015 16:52	
Result Name:	_____GIPUZKOA LED/CMP.215.VE.29.C	
Type of Test:	EN61000:2001 Harmonics	
Limits:	Class C > 25W	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	

Harmonic Results Against Chosen Limits:

PASS

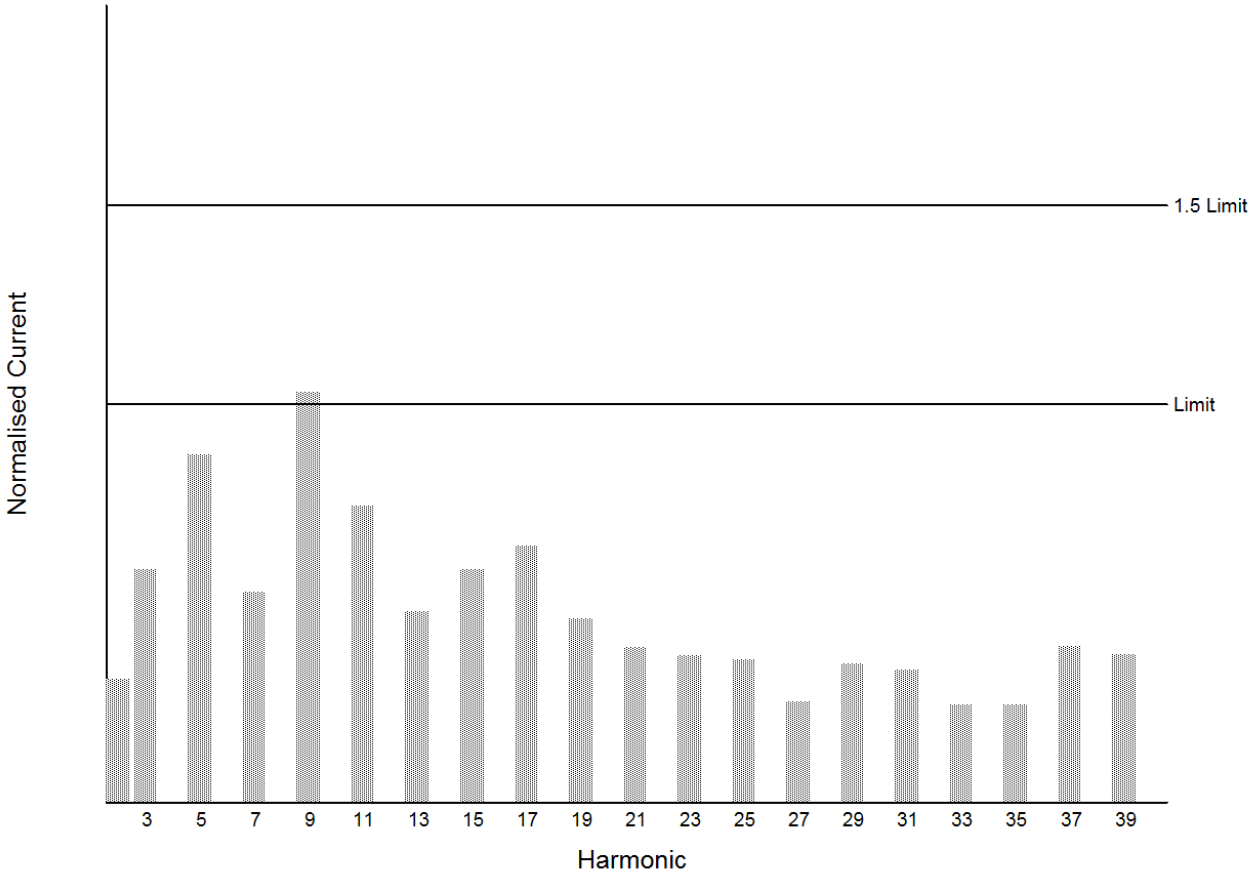
Test Parameter Details	**User Entered**	**Measured**
Operating Frequency:	50	49.9580
Operating Voltage:	230	224.4060
Specified Power:	0.0000	114.0195
Fundamental Current:	0.5440	0.5393
Power Factor:	0.9240	0.9162
Average Input Current:		0.5490
Maximum POHC:		0.0161
POHC Limit:		0.0516
Maximum THC:		0.1079
Minimum Power:	75	
Class Multiplier:	1.0000	
Test Duration:	00:02:30	

Product:	PROYECTOR LED	17 Dec 2015 10:43
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 25% 2415/1062 RBT	
Result Name:	_____GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 16 Dec 2015 16:52
Type of Test:	Fluctuating Harmonics Test - Single Harmonic Plot (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		



Product:	PROYECTOR LED	17 Dec 2015 10:43
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 25% 2415/1062 RBT	
Result Name:	_____GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 16 Dec 2015 16:52
Type of Test:	Fluctuating Harmonics Test - Normalised Worst Case Bar Chart (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		

Class	Class C > 25W
Class Multiplier	1



Product:	PROYECTOR LED	17 Dec 2015 10:44
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 25% 2415/1062 RBT	
Result Name:	_____GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 16 Dec 2015 16:52
Type of Test:	Fluctuating Harmonics Test - Source Qualification (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		

	Nominal	Measured	Deviation	Allowed Deviation	Result
Supply Voltage	230.00V	224.41V	5.59V	4.60V	Fail
Supply Frequency	50.00Hz	49.96Hz	0.04Hz	0.25Hz	Pass

Harmonic	Reading	Limit	Result	Harmonic	Reading	Limit	Result
2	0.18%	0.20%	Pass	3	0.93%	0.90%	Fail
4	0.08%	0.20%	Pass	5	1.72%	0.40%	Fail
6	0.13%	0.20%	Pass	7	0.94%	0.30%	Fail
8	0.24%	0.20%	Fail	9	0.51%	0.20%	Fail
10	0.24%	0.20%	Fail	11	0.34%	0.10%	Fail
12	0.13%	0.10%	Fail	13	0.08%	0.10%	Pass
14	0.08%	0.10%	Pass	15	0.14%	0.10%	Fail
16	0.08%	0.10%	Pass	17	0.14%	0.10%	Fail
18	0.08%	0.10%	Pass	19	0.08%	0.10%	Pass
20	0.08%	0.10%	Pass	21	0.08%	0.10%	Pass
22	0.08%	0.10%	Pass	23	0.08%	0.10%	Pass
24	0.08%	0.10%	Pass	25	0.09%	0.10%	Pass
26	0.08%	0.10%	Pass	27	0.08%	0.10%	Pass
28	0.08%	0.10%	Pass	29	0.08%	0.10%	Pass
30	0.08%	0.10%	Pass	31	0.09%	0.10%	Pass
32	0.08%	0.10%	Pass	33	0.10%	0.10%	Fail
34	0.08%	0.10%	Pass	35	0.08%	0.10%	Pass
36	0.08%	0.10%	Pass	37	0.08%	0.10%	Pass
38	0.08%	0.10%	Pass	39	0.10%	0.10%	Fail
40	0.08%	0.10%	Pass				

Product:	PROYECTOR LED	17 Dec 2015 10:44
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 25% 2415/1062 RBT	
Result Name:	_____GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 16 Dec 2015 16:52
Type of Test:	Fluctuating Harmonics Test - Worst Case Table (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result:		
PASS		

Class	Class C > 25W
Class Multiplier	1

Harm	Limit 1	Limit 2	Average Reading	<L1	<L2	Max Reading	<L2	Pass FAIL	Harm	Limit 1	Limit 2	Average Reading	<L1	<L2	Max Reading	<L2	Pass FAIL
2	10.88mA	16.32mA	2.668mA	✓	✓	3.385mA	✓	N/A	3	150.7mA	226.1mA	87.19mA	✓	✓	88.26mA	✓	Pass
4	None	None	1.486mA			1.813mA		N/A	5	54.40mA	81.60mA	45.94mA	✓	✓	47.59mA	✓	Pass
6	None	None	0.994mA			1.746mA		N/A	7	38.07mA	57.11mA	19.02mA	✓	✓	20.17mA	✓	Pass
8	None	None	2.571mA			3.541mA		N/A	9	27.20mA	40.80mA	26.97mA	✓	✓	28.02mA	✓	Pass
10	None	None	2.900mA			3.761mA		N/A	11	16.32mA	24.48mA	9.421mA	✓	✓	12.16mA	✓	Pass
12	None	None	1.392mA			2.381mA		N/A	13	16.32mA	24.48mA	6.673mA	✓	✓	7.841mA	✓	Pass
14	None	None	1.029mA			1.713mA		N/A	15	16.32mA	24.48mA	8.343mA	✓	✓	9.562mA	✓	Pass
16	None	None	0.798mA			1.223mA		N/A	17	16.32mA	24.48mA	10.00mA	✓	✓	10.53mA	✓	Pass
18	None	None	0.752mA			1.150mA		N/A	19	16.32mA	24.48mA	6.701mA	✓	✓	7.562mA	✓	Pass
20	None	None	0.802mA			1.100mA		N/A	21	16.32mA	24.48mA	5.806mA	✓	✓	6.374mA	✓	Pass
22	None	None	0.686mA			0.874mA		N/A	23	16.32mA	24.48mA	5.112mA	✓	✓	6.041mA	✓	Pass
24	None	None	1.168mA			1.477mA		N/A	25	16.32mA	24.48mA	5.177mA	✓	✓	5.876mA	✓	Pass
26	None	None	0.981mA			1.212mA		N/A	27	16.32mA	24.48mA	3.787mA	✓	✓	4.154mA	✓	N/A
28	None	None	0.782mA			1.111mA		N/A	29	16.32mA	24.48mA	4.832mA	✓	✓	5.685mA	✓	N/A
30	None	None	0.929mA			1.218mA		N/A	31	16.32mA	24.48mA	5.072mA	✓	✓	5.473mA	✓	Pass
32	None	None	1.003mA			1.293mA		N/A	33	16.32mA	24.48mA	3.456mA	✓	✓	4.001mA	✓	N/A
34	None	None	1.044mA			1.333mA		N/A	35	16.32mA	24.48mA	3.427mA	✓	✓	4.035mA	✓	N/A
36	None	None	1.191mA			1.546mA		N/A	37	16.32mA	24.48mA	5.433mA	✓	✓	6.426mA	✓	Pass
38	None	None	1.269mA			1.664mA		N/A	39	16.32mA	24.48mA	5.267mA	✓	✓	6.055mA	✓	Pass
40	None	None	1.429mA			1.803mA		N/A									

<L1 : Reading is below limit 1.

<L2 : Reading is below limit 2.

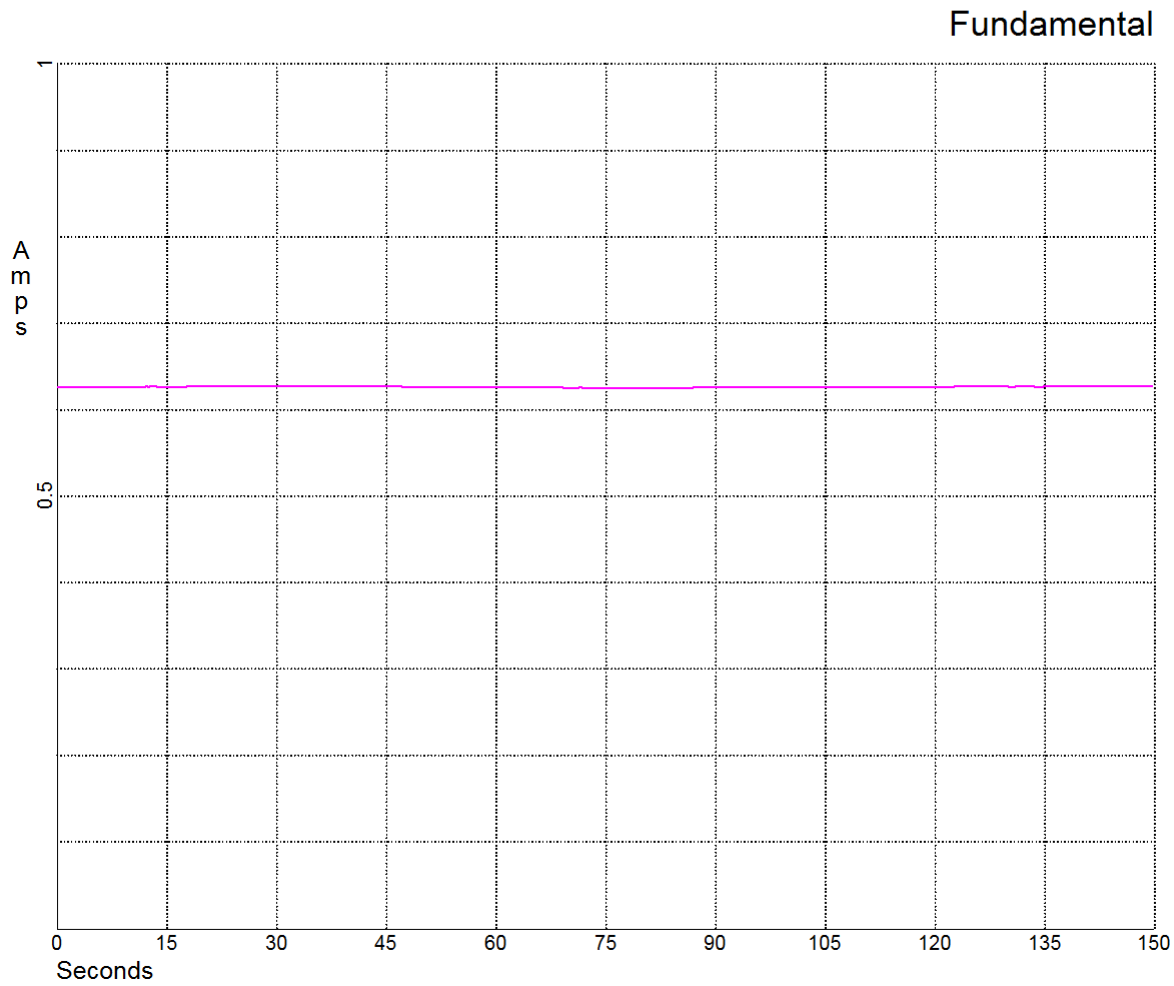
N/A : Harmonic current below 0.6% of rated current or 5mA, whichever is greater, are disregarded.

Operation mode	5
Port measured	Input AC
Mains voltage and frequency at which the test has been done	230 Vac 50 Hz
Verdict	P

Product:	PROYECTOR LED	17 Dec 2015 10:44
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 50% 2415/1062 RBT	
Test Date:	16 Dec 2015 16:36	
Result Name:	_____GIPUZKOA LED/CMP.215.VE.29.C	
Type of Test:	EN61000:2001 Harmonics	
Limits:	Class C > 25W	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Harmonic Results Against Chosen Limits:	**PASS**	

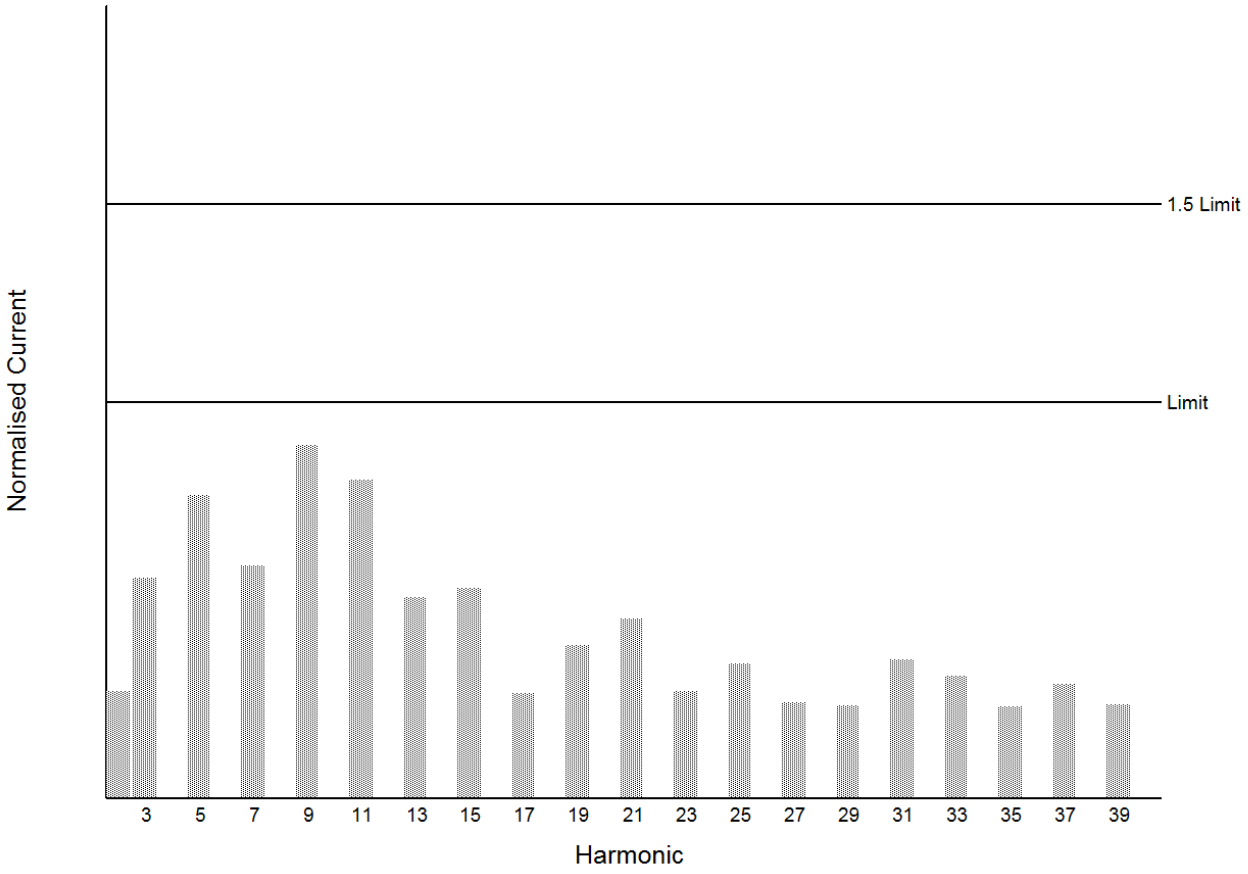
Test Parameter Details	**User Entered**	**Measured**
Operating Frequency:	50	49.9648
Operating Voltage:	230	226.8689
Specified Power:	0.0000	135.9375
Fundamental Current:	0.6360	0.6286
Power Factor:	0.9420	0.9356
Average Input Current:		0.6383
Maximum POHC:		0.0175
POHC Limit:		0.0603
Maximum THC:		0.1199
Minimum Power:	75	
Class Multiplier:	1.0000	
Test Duration:	00:02:30	

Product:	PROYECTOR LED	17 Dec 2015 10:45
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 50% 2415/1062 RBT	
Result Name:	_____GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07	Test Date:	16 Dec 2015 16:36
Type of Test:	Fluctuating Harmonics Test - Single Harmonic Plot (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		



Product:	PROYECTOR LED	17 Dec 2015 10:45
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 50% 2415/1062 RBT	
Result Name:	_____GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 16 Dec 2015 16:36
Type of Test:	Fluctuating Harmonics Test - Normalised Worst Case Bar Chart (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		

Class	Class C > 25W
Class Multiplier	1



Product:	PROYECTOR LED	17 Dec 2015 10:45
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 50% 2415/1062 RBT	
Result Name:	_____GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07	Test Date:	16 Dec 2015 16:36
Type of Test:	Fluctuating Harmonics Test - Source Qualification (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		

	Nominal	Measured	Deviation	Allowed Deviation	Result
Supply Voltage	230.00V	226.87V	3.13V	4.60V	Pass
Supply Frequency	50.00Hz	49.96Hz	0.04Hz	0.25Hz	Pass

Harmonic	Reading	Limit	Result	Harmonic	Reading	Limit	Result
2	0.11%	0.20%	Pass	3	0.86%	0.90%	Pass
4	0.08%	0.20%	Pass	5	1.77%	0.40%	Fail
6	0.03%	0.20%	Pass	7	0.90%	0.30%	Fail
8	0.08%	0.20%	Pass	9	0.46%	0.20%	Fail
10	0.03%	0.20%	Pass	11	0.35%	0.10%	Fail
12	0.03%	0.10%	Pass	13	0.13%	0.10%	Fail
14	0.03%	0.10%	Pass	15	0.08%	0.10%	Pass
16	0.03%	0.10%	Pass	17	0.03%	0.10%	Pass
18	0.03%	0.10%	Pass	19	0.03%	0.10%	Pass
20	0.03%	0.10%	Pass	21	0.03%	0.10%	Pass
22	0.03%	0.10%	Pass	23	0.03%	0.10%	Pass
24	0.03%	0.10%	Pass	25	0.03%	0.10%	Pass
26	0.03%	0.10%	Pass	27	0.03%	0.10%	Pass
28	0.03%	0.10%	Pass	29	0.03%	0.10%	Pass
30	0.03%	0.10%	Pass	31	0.03%	0.10%	Pass
32	0.03%	0.10%	Pass	33	0.03%	0.10%	Pass
34	0.03%	0.10%	Pass	35	0.03%	0.10%	Pass
36	0.03%	0.10%	Pass	37	0.03%	0.10%	Pass
38	0.03%	0.10%	Pass	39	0.03%	0.10%	Pass
40	0.03%	0.10%	Pass				

Product:	PROYECTOR LED	17 Dec 2015 10:45
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 50% 2415/1062 RBT	
Result Name:	_____GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 16 Dec 2015 16:36
Type of Test:	Fluctuating Harmonics Test - Worst Case Table (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		

Class	Class C > 25W
Class Multiplier	1

Harm	Limit 1	Limit 2	Average Reading	<L1	<L2	Max Reading	<L2	Pass FAIL	Harm	Limit 1	Limit 2	Average Reading	<L1	<L2	Max Reading	<L2	Pass FAIL
2	12.71mA	19.07mA	3.088mA	✓	✓	3.443mA	✓	N/A	3	179.7mA	269.6mA	99.22mA	✓	✓	99.79mA	✓	Pass
4	None	None	0.805mA			1.029mA		N/A	5	63.59mA	95.39mA	47.16mA	✓	✓	48.61mA	✓	Pass
6	None	None	0.712mA			0.901mA		N/A	7	44.51mA	66.77mA	23.32mA	✓	✓	26.13mA	✓	Pass
8	None	None	1.486mA			1.793mA		N/A	9	31.79mA	47.69mA	27.12mA	✓	✓	28.30mA	✓	Pass
10	None	None	1.000mA			1.225mA		N/A	11	19.07mA	28.61mA	9.642mA	✓	✓	15.33mA	✓	Pass
12	None	None	0.899mA			1.076mA		N/A	13	19.07mA	28.61mA	7.034mA	✓	✓	9.689mA	✓	Pass
14	None	None	0.399mA			0.589mA		N/A	15	19.07mA	28.61mA	9.570mA	✓	✓	10.12mA	✓	Pass
16	None	None	0.368mA			0.575mA		N/A	17	19.07mA	28.61mA	4.244mA	✓	✓	5.027mA	✓	N/A
18	None	None	0.889mA			1.060mA		N/A	19	19.07mA	28.61mA	6.577mA	✓	✓	7.383mA	✓	Pass
20	None	None	0.339mA			0.472mA		N/A	21	19.07mA	28.61mA	8.237mA	✓	✓	8.613mA	✓	Pass
22	None	None	0.492mA			0.792mA		N/A	23	19.07mA	28.61mA	4.523mA	✓	✓	5.120mA	✓	N/A
24	None	None	0.683mA			0.882mA		N/A	25	19.07mA	28.61mA	6.163mA	✓	✓	6.484mA	✓	Pass
26	None	None	0.335mA			0.550mA		N/A	27	19.07mA	28.61mA	4.199mA	✓	✓	4.599mA	✓	N/A
28	None	None	0.685mA			0.863mA		N/A	29	19.07mA	28.61mA	4.094mA	✓	✓	4.464mA	✓	N/A
30	None	None	0.505mA			0.848mA		N/A	31	19.07mA	28.61mA	6.265mA	✓	✓	6.685mA	✓	Pass
32	None	None	0.598mA			0.919mA		N/A	33	19.07mA	28.61mA	5.530mA	✓	✓	5.861mA	✓	Pass
34	None	None	0.520mA			0.782mA		N/A	35	19.07mA	28.61mA	4.127mA	✓	✓	4.399mA	✓	N/A
36	None	None	0.533mA			0.743mA		N/A	37	19.07mA	28.61mA	5.011mA	✓	✓	5.498mA	✓	Pass
38	None	None	0.869mA			1.150mA		N/A	39	19.07mA	28.61mA	4.048mA	✓	✓	4.530mA	✓	N/A
40	None	None	0.562mA			0.793mA		N/A									

<L1 : Reading is below limit 1.

<L2 : Reading is below limit 2.

N/A : Harmonic current below 0.6% of rated current or 5mA, whichever is greater, are disregarded.

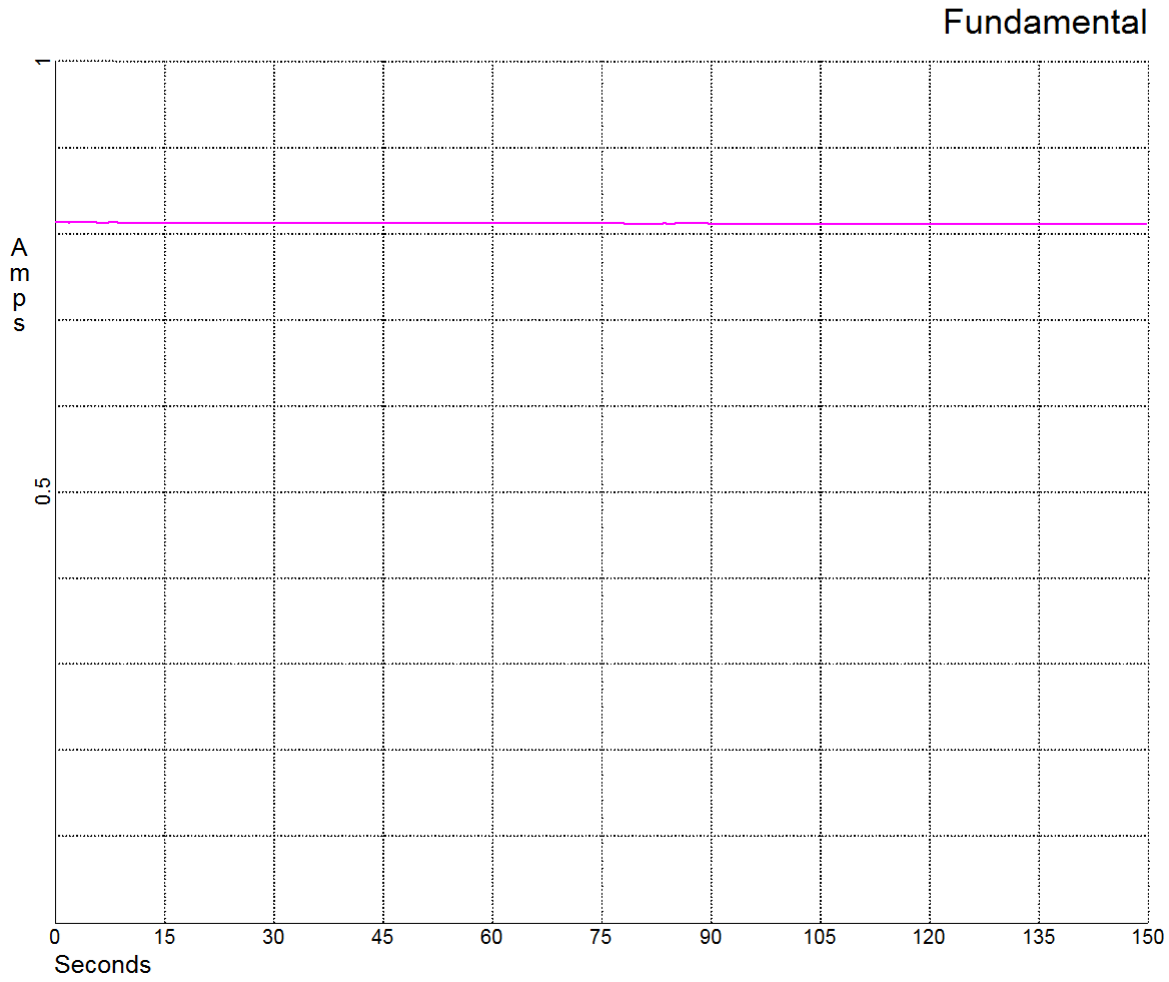
Operation mode	7
Port measured	Input AC
Mains voltage and frequency at which the test has been done	230 Vac 50 Hz
Verdict	P

Product:	PROYECTOR LED	17 Dec 2015 10:47
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 75% 2415/1062 RBT GIPUZKOA LED/CMP.215.VE.29.C	
Test Date:	15 Dec 2015 15:20	
Result Name:	_GIPUZKOALED/CMP215V	
Type of Test:	EN61000:2001 Harmonics	
Limits:	Class C > 25W	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Harmonic Results Against Chosen Limits:		

PASS

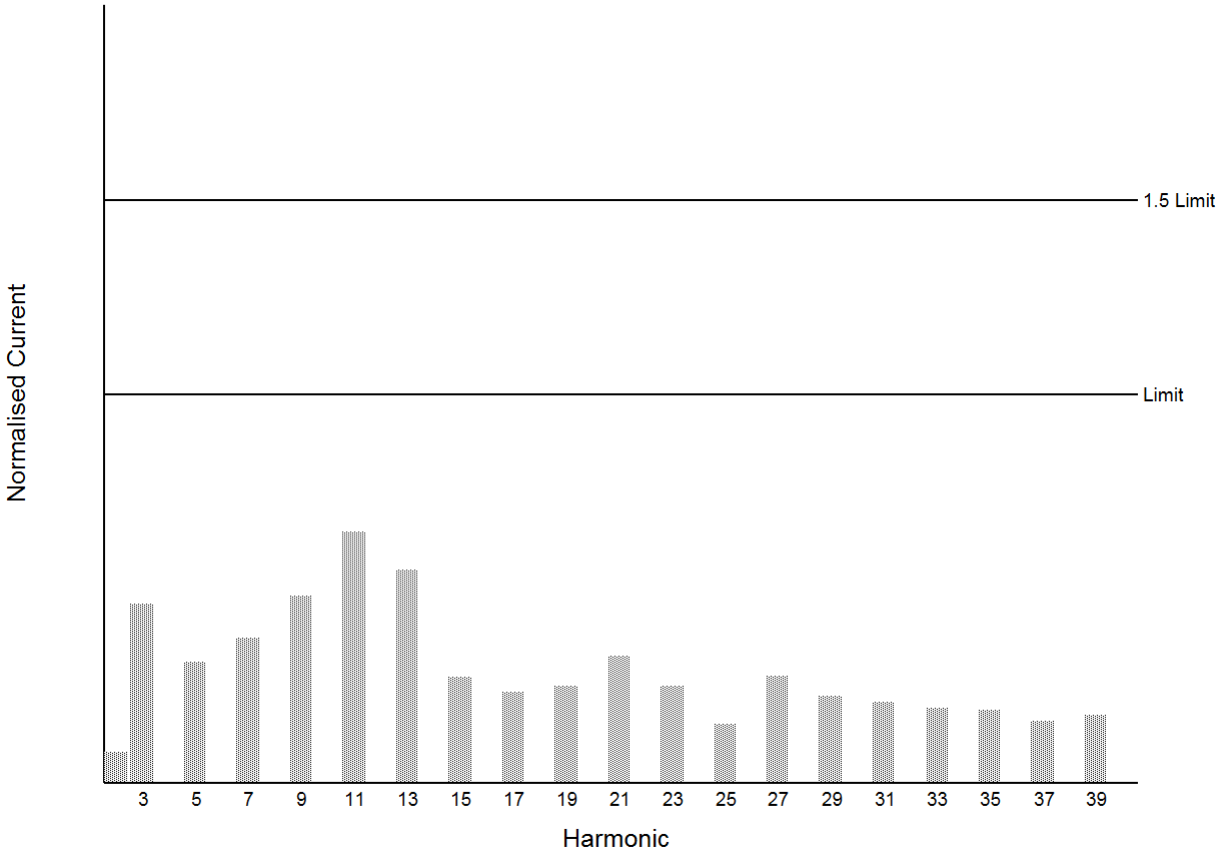
Test Parameter Details	**User Entered**	**Measured**
Operating Frequency:	50	49.9922
Operating Voltage:	230	228.6683
Specified Power:	20.0000	181.4688
Fundamental Current:	0.8200	0.8144
Power Factor:	0.9630	0.9643
Average Input Current:		0.8222
Maximum POHC:		0.0151
POHC Limit:		0.0778
Maximum THC:		0.1183
Minimum Power:	75	
Class Multiplier:	1.0000	
Test Duration:	00:02:30	

Product:	PROYECTOR LED	17 Dec 2015 10:47
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 75% 2415/1062 RBT GIPUZKOA LED/CMP.215.VE.29.C	
Result Name:	_GIPUZKOALED/CMP215V	
Voltech IEC1000-3 Windows Software 3.11.07	Test Date:	15 Dec 2015 15:20
Type of Test:	Fluctuating Harmonics Test - Single Harmonic Plot (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		



Product:	PROYECTOR LED	17 Dec 2015 10:47
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 75% 2415/1062 RBT GIPUZKOA LED/CMP.215.VE.29.C	
Result Name:	_GIPUZKOALED/CMP215V	
Voltech IEC1000-3 Windows Software 3.11.07	Test Date:	15 Dec 2015 15:20
Type of Test:	Fluctuating Harmonics Test - Normalised Worst Case Bar Chart (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		

Class	Class C > 25W
Class Multiplier	1



Product:	PROYECTOR LED	17 Dec 2015 10:48
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 75% 2415/1062 RBT GIPUZKOA LED/CMP.215.VE.29.C	
Result Name:	_GIPUZKOALED/CMP215V	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 15 Dec 2015 15:20
Type of Test:	Fluctuating Harmonics Test - Source Qualification (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result:		

PASS

	Nominal	Measured	Deviation	Allowed Deviation	Result
Supply Voltage	230.00V	228.67V	1.33V	4.60V	Pass
Supply Frequency	50.00Hz	49.99Hz	0.01Hz	0.25Hz	Pass

Harmonic	Reading	Limit	Result	Harmonic	Reading	Limit	Result
2	0.03%	0.20%	Pass	3	0.03%	0.90%	Pass
4	0.03%	0.20%	Pass	5	0.03%	0.40%	Pass
6	0.03%	0.20%	Pass	7	0.03%	0.30%	Pass
8	0.03%	0.20%	Pass	9	0.03%	0.20%	Pass
10	0.03%	0.20%	Pass	11	0.03%	0.10%	Pass
12	0.03%	0.10%	Pass	13	0.03%	0.10%	Pass
14	0.03%	0.10%	Pass	15	0.03%	0.10%	Pass
16	0.03%	0.10%	Pass	17	0.03%	0.10%	Pass
18	0.03%	0.10%	Pass	19	0.03%	0.10%	Pass
20	0.03%	0.10%	Pass	21	0.03%	0.10%	Pass
22	0.03%	0.10%	Pass	23	0.03%	0.10%	Pass
24	0.03%	0.10%	Pass	25	0.03%	0.10%	Pass
26	0.03%	0.10%	Pass	27	0.03%	0.10%	Pass
28	0.03%	0.10%	Pass	29	0.03%	0.10%	Pass
30	0.03%	0.10%	Pass	31	0.03%	0.10%	Pass
32	0.03%	0.10%	Pass	33	0.03%	0.10%	Pass
34	0.03%	0.10%	Pass	35	0.03%	0.10%	Pass
36	0.03%	0.10%	Pass	37	0.03%	0.10%	Pass
38	0.03%	0.10%	Pass	39	0.03%	0.10%	Pass
40	0.03%	0.10%	Pass				

Product:	PROYECTOR LED	17 Dec 2015 10:48
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 75% 2415/1062 RBT GIPUZKOA LED/CMP.215.VE.29.C	
Result Name:	_GIPUZKOALED/CMP215V	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 15 Dec 2015 15:20
Type of Test:	Fluctuating Harmonics Test - Worst Case Table (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result:		
PASS		

Class	Class C > 25W
Class Multiplier	1

Harm	Limit 1	Limit 2	Average Reading	<L1	<L2	Max Reading	<L2	Pass FAIL	Harm	Limit 1	Limit 2	Average Reading	<L1	<L2	Max Reading	<L2	Pass FAIL
2	16.40mA	24.59mA	0.961mA	✓	✓	1.286mA	✓	N/A	3	236.8mA	355.3mA	107.5mA	✓	✓	108.8mA	✓	Pass
4	None	None	1.491mA			2.025mA		N/A	5	81.99mA	122.9mA	25.16mA	✓	✓	25.54mA	✓	Pass
6	None	None	1.204mA			1.512mA		N/A	7	57.39mA	86.09mA	20.56mA	✓	✓	21.30mA	✓	Pass
8	None	None	1.178mA			1.425mA		N/A	9	40.99mA	61.49mA	19.06mA	✓	✓	19.68mA	✓	Pass
10	None	None	0.913mA			1.245mA		N/A	11	24.59mA	36.89mA	15.25mA	✓	✓	15.89mA	✓	Pass
12	None	None	0.803mA			1.212mA		N/A	13	24.59mA	36.89mA	13.03mA	✓	✓	13.48mA	✓	Pass
14	None	None	0.823mA			1.074mA		N/A	15	24.59mA	36.89mA	6.299mA	✓	✓	6.702mA	✓	Pass
16	None	None	0.738mA			1.047mA		N/A	17	24.59mA	36.89mA	4.931mA	✓	✓	5.719mA	✓	N/A
18	None	None	0.821mA			1.118mA		N/A	19	24.59mA	36.89mA	5.552mA	✓	✓	6.115mA	✓	Pass
20	None	None	0.762mA			1.050mA		N/A	21	24.59mA	36.89mA	7.066mA	✓	✓	8.010mA	✓	Pass
22	None	None	0.802mA			1.074mA		N/A	23	24.59mA	36.89mA	5.132mA	✓	✓	6.117mA	✓	Pass
24	None	None	0.798mA			1.113mA		N/A	25	24.59mA	36.89mA	3.180mA	✓	✓	3.723mA	✓	N/A
26	None	None	0.867mA			1.162mA		N/A	27	24.59mA	36.89mA	6.240mA	✓	✓	6.771mA	✓	Pass
28	None	None	0.832mA			1.114mA		N/A	29	24.59mA	36.89mA	4.769mA	✓	✓	5.477mA	✓	N/A
30	None	None	0.909mA			1.194mA		N/A	31	24.59mA	36.89mA	4.483mA	✓	✓	5.089mA	✓	N/A
32	None	None	0.961mA			1.268mA		N/A	33	24.59mA	36.89mA	3.513mA	✓	✓	4.743mA	✓	N/A
34	None	None	0.966mA			1.315mA		N/A	35	24.59mA	36.89mA	3.768mA	✓	✓	4.606mA	✓	N/A
36	None	None	1.020mA			1.410mA		N/A	37	24.59mA	36.89mA	3.195mA	✓	✓	3.893mA	✓	N/A
38	None	None	1.027mA			1.425mA		N/A	39	24.59mA	36.89mA	3.632mA	✓	✓	4.249mA	✓	N/A
40	None	None	0.989mA			1.440mA		N/A									

<L1 : Reading is below limit 1.

<L2 : Reading is below limit 2.

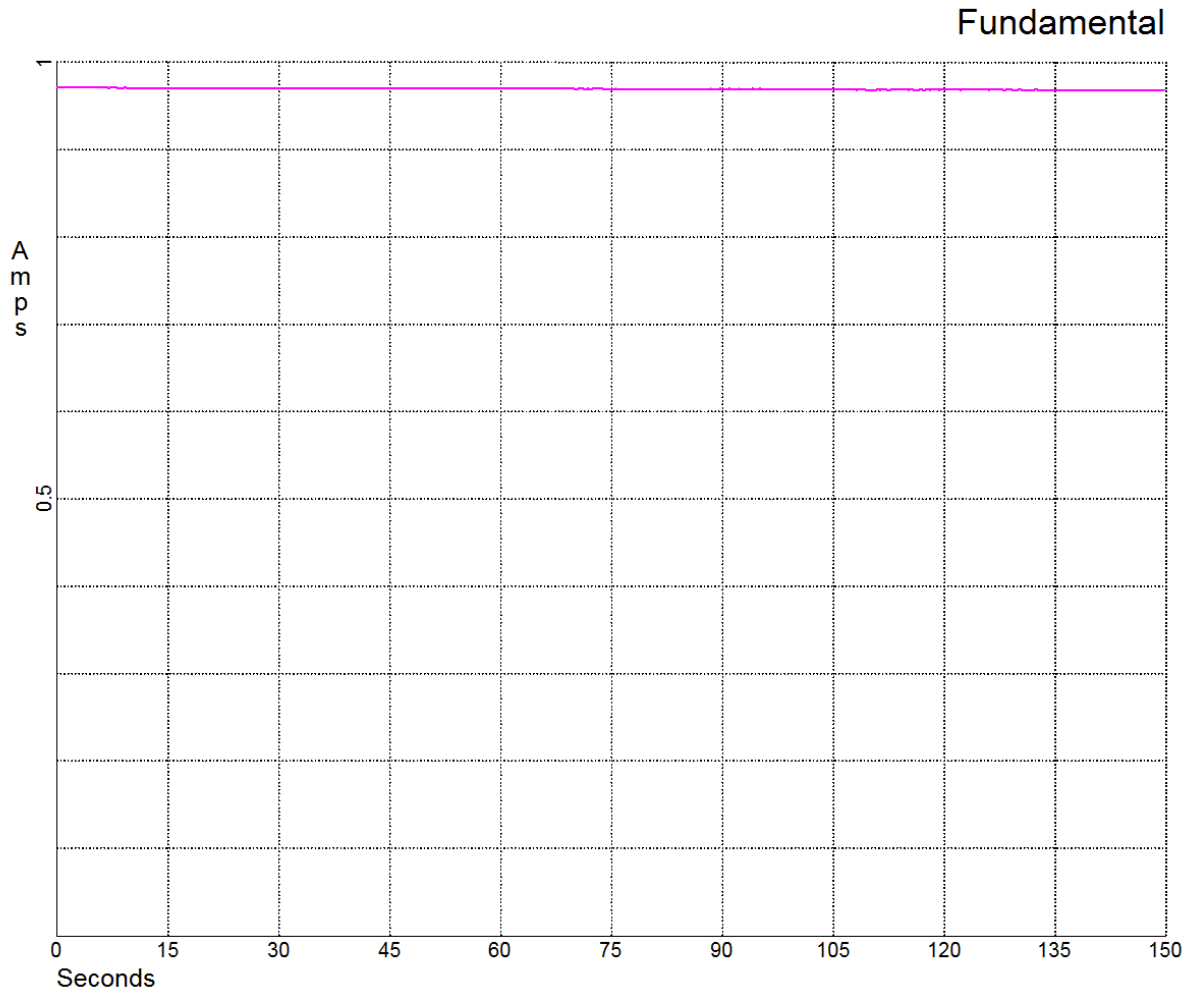
N/A : Harmonic current below 0.6% of rated current or 5mA, whichever is greater, are disregarded.

Operation mode	1
Port measured	Input AC
Mains voltage and frequency at which the test has been done	230 Vac 50 Hz
Verdict	P

Product:	PROYECTOR LED	17 Dec 2015 10:49
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 100% 2415/1062 RBT	
Test Date:	07 Dec 2015 10:00	
Result Name:	_GIPUZKOA LED/CMP.215.VE.29.C	
Type of Test:	EN61000:2001 Harmonics	
Limits:	Class C > 25W	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Harmonic Results Against Chosen Limits:	**PASS**	

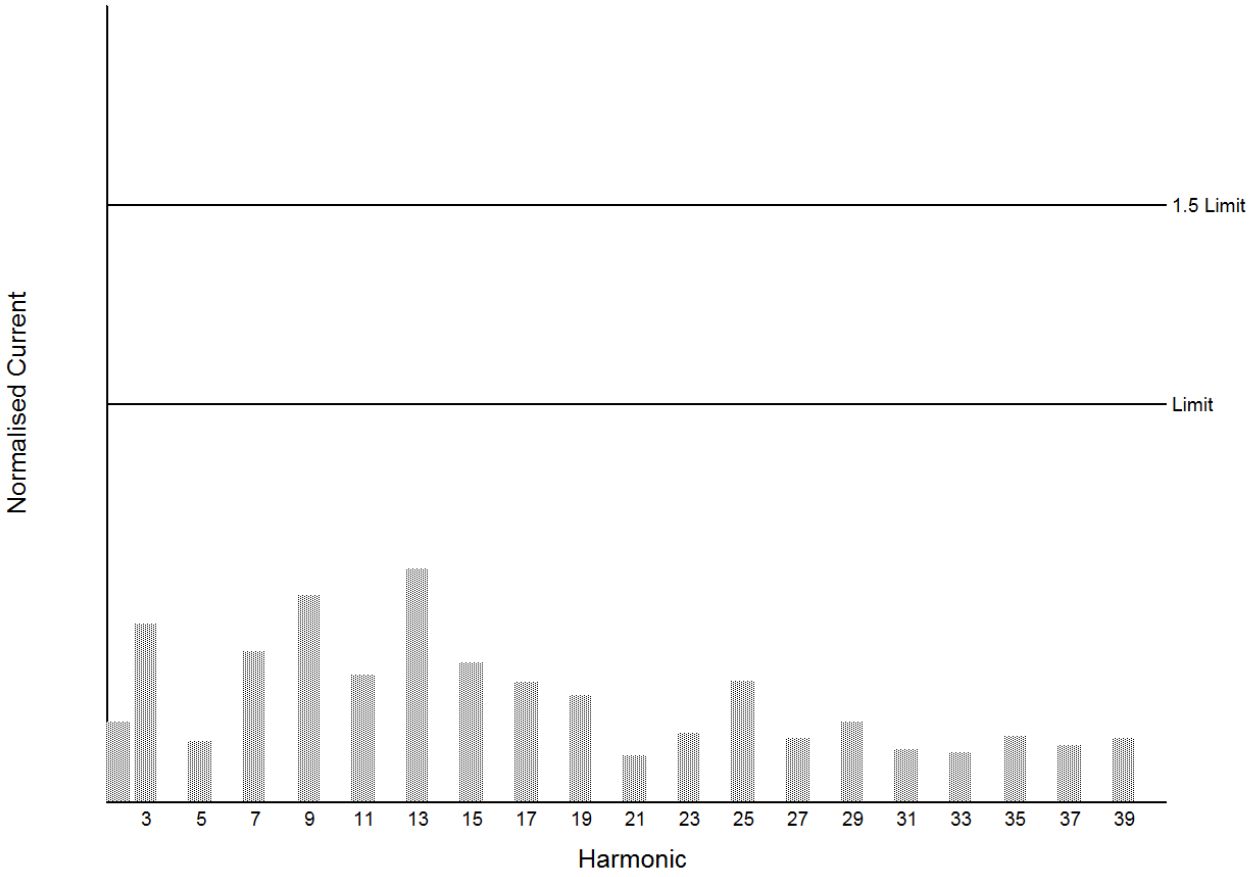
Test Parameter Details	**User Entered**	**Measured**
Operating Frequency:	50	49.9922
Operating Voltage:	230	228.3714
Specified Power:	14.0000	217.3125
Fundamental Current:	1.0000	0.9719
Power Factor:	0.9670	0.9665
Average Input Current:		0.9812
Maximum POHC:		0.0148
POHC Limit:		0.0949
Maximum THC:		0.1375
Minimum Power:	75	
Class Multiplier:	1.0000	
Test Duration:	00:02:30	

Product:	PROYECTOR LED	17 Dec 2015 10:50
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 100% 2415/1062 RBT	
Result Name:	_GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07	Test Date:	07 Dec 2015 10:00
Type of Test:	Fluctuating Harmonics Test - Single Harmonic Plot (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		



Product:	PROYECTOR LED	17 Dec 2015 10:50
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 100% 2415/1062 RBT	
Result Name:	_GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07	Test Date: 07 Dec 2015 10:00	
Type of Test:	Fluctuating Harmonics Test - Normalised Worst Case Bar Chart (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		

Class	Class C > 25W
Class Multiplier	1



Product:	PROYECTOR LED	17 Dec 2015 10:50
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 100% 2415/1062 RBT	
Result Name:	_GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07	Test Date:	07 Dec 2015 10:00
Type of Test:	Fluctuating Harmonics Test - Source Qualification (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		

	Nominal	Measured	Deviation	Allowed Deviation	Result
Supply Voltage	230.00V	228.37V	1.63V	4.60V	Pass
Supply Frequency	50.00Hz	49.99Hz	0.01Hz	0.25Hz	Pass

Harmonic	Reading	Limit	Result	Harmonic	Reading	Limit	Result
2	0.03%	0.20%	Pass	3	0.03%	0.90%	Pass
4	0.03%	0.20%	Pass	5	0.03%	0.40%	Pass
6	0.03%	0.20%	Pass	7	0.03%	0.30%	Pass
8	0.03%	0.20%	Pass	9	0.03%	0.20%	Pass
10	0.03%	0.20%	Pass	11	0.03%	0.10%	Pass
12	0.03%	0.10%	Pass	13	0.03%	0.10%	Pass
14	0.03%	0.10%	Pass	15	0.03%	0.10%	Pass
16	0.03%	0.10%	Pass	17	0.03%	0.10%	Pass
18	0.03%	0.10%	Pass	19	0.03%	0.10%	Pass
20	0.03%	0.10%	Pass	21	0.03%	0.10%	Pass
22	0.03%	0.10%	Pass	23	0.03%	0.10%	Pass
24	0.03%	0.10%	Pass	25	0.03%	0.10%	Pass
26	0.03%	0.10%	Pass	27	0.03%	0.10%	Pass
28	0.03%	0.10%	Pass	29	0.03%	0.10%	Pass
30	0.03%	0.10%	Pass	31	0.03%	0.10%	Pass
32	0.03%	0.10%	Pass	33	0.03%	0.10%	Pass
34	0.03%	0.10%	Pass	35	0.03%	0.10%	Pass
36	0.03%	0.10%	Pass	37	0.03%	0.10%	Pass
38	0.03%	0.10%	Pass	39	0.03%	0.10%	Pass
40	0.03%	0.10%	Pass				

Product:	PROYECTOR LED	17 Dec 2015 10:50
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 100% 2415/1062 RBT	
Result Name:	_GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 07 Dec 2015 10:00
Type of Test:	Fluctuating Harmonics Test - Worst Case Table (2001)	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**		

Class	Class C > 25W
Class Multiplier	1

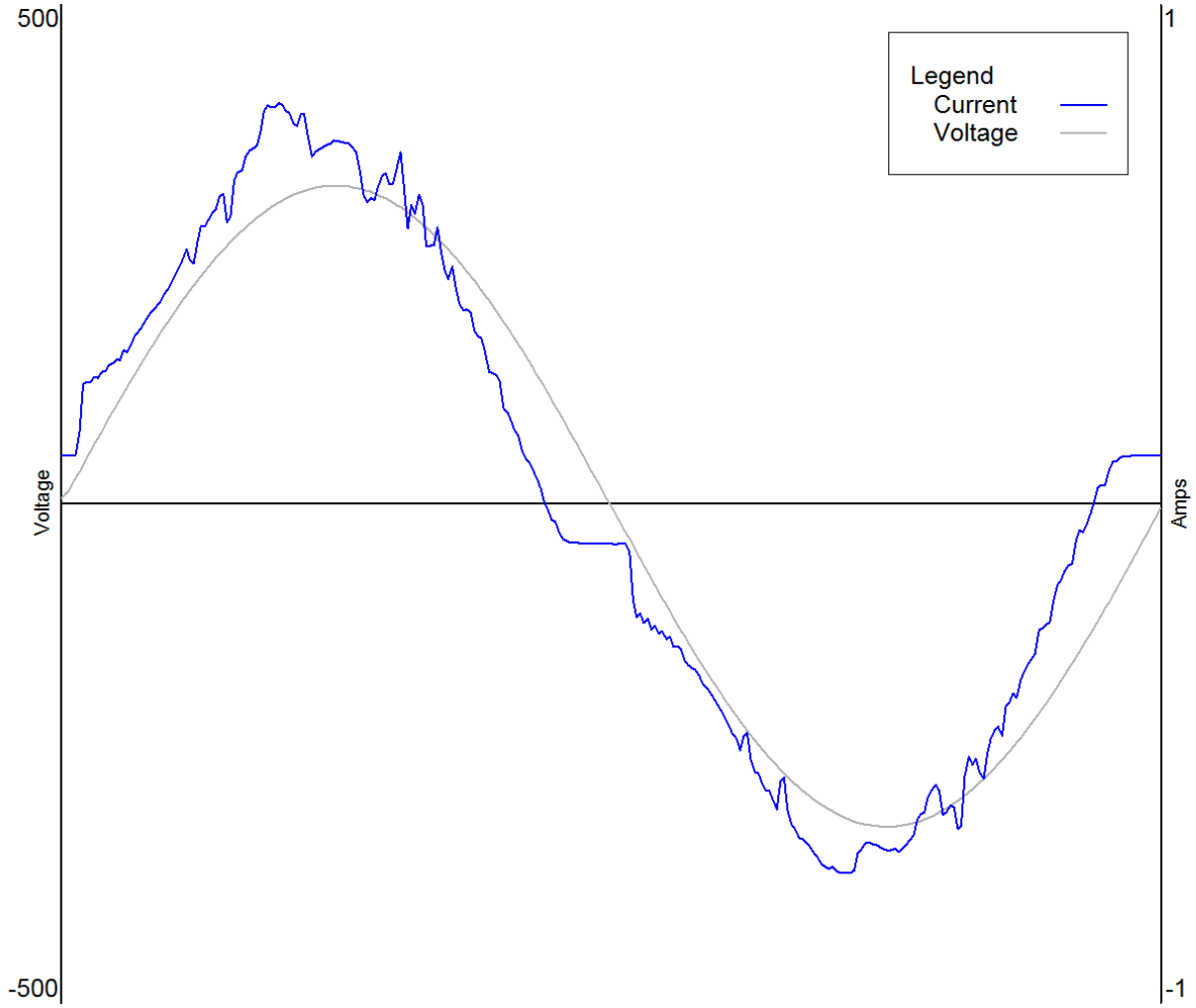
Harm	Limit 1	Limit 2	Average Reading	<L1 <L2	Max Reading	<L2	Pass FAIL	Harm	Limit 1	Limit 2	Average Reading	<L1 <L2	Max Reading	<L2	Pass FAIL
2	20.00mA	30.00mA	3.128mA	✓ ✓	4.034mA	✓	N/A	3	290.1mA	435.1mA	127.3mA	✓ ✓	129.9mA	✓	Pass
4	None	None	1.926mA		2.589mA		N/A	5	99.99mA	149.9mA	13.67mA	✓ ✓	15.25mA	✓	Pass
6	None	None	1.992mA		2.544mA		N/A	7	70.00mA	105.0mA	22.97mA	✓ ✓	26.42mA	✓	Pass
8	None	None	1.924mA		2.603mA		N/A	9	49.99mA	74.99mA	24.79mA	✓ ✓	26.01mA	✓	Pass
10	None	None	1.947mA		2.507mA		N/A	11	30.00mA	44.99mA	8.438mA	✓ ✓	9.617mA	✓	Pass
12	None	None	1.811mA		2.411mA		N/A	13	30.00mA	44.99mA	16.35mA	✓ ✓	17.58mA	✓	Pass
14	None	None	1.779mA		2.332mA		N/A	15	30.00mA	44.99mA	8.191mA	✓ ✓	10.48mA	✓	Pass
16	None	None	1.651mA		2.157mA		N/A	17	30.00mA	44.99mA	8.131mA	✓ ✓	9.033mA	✓	Pass
18	None	None	1.394mA		1.780mA		N/A	19	30.00mA	44.99mA	6.730mA	✓ ✓	8.064mA	✓	Pass
20	None	None	1.340mA		1.716mA		N/A	21	30.00mA	44.99mA	2.144mA	✓ ✓	3.473mA	✓	N/A
22	None	None	1.262mA		1.652mA		N/A	23	30.00mA	44.99mA	4.141mA	✓ ✓	5.183mA	✓	N/A
24	None	None	1.207mA		1.548mA		N/A	25	30.00mA	44.99mA	8.353mA	✓ ✓	9.109mA	✓	Pass
26	None	None	1.121mA		1.503mA		N/A	27	30.00mA	44.99mA	4.287mA	✓ ✓	4.809mA	✓	N/A
28	None	None	1.167mA		1.422mA		N/A	29	30.00mA	44.99mA	4.997mA	✓ ✓	6.021mA	✓	N/A
30	None	None	1.252mA		1.574mA		N/A	31	30.00mA	44.99mA	3.569mA	✓ ✓	3.987mA	✓	N/A
32	None	None	1.298mA		1.606mA		N/A	33	30.00mA	44.99mA	3.320mA	✓ ✓	3.752mA	✓	N/A
34	None	None	1.316mA		1.650mA		N/A	35	30.00mA	44.99mA	4.256mA	✓ ✓	4.947mA	✓	N/A
36	None	None	1.353mA		1.722mA		N/A	37	30.00mA	44.99mA	3.755mA	✓ ✓	4.303mA	✓	N/A
38	None	None	1.375mA		1.749mA		N/A	39	30.00mA	44.99mA	4.099mA	✓ ✓	4.805mA	✓	N/A
40	None	None	1.388mA		1.719mA		N/A								

<L1 : Reading is below limit 1.

<L2 : Reading is below limit 2.

N/A : Harmonic current below 0.6% of rated current or 5mA, whichever is greater, are disregarded.

Product:	PROYECTOR LED	17 Dec 2015 10:55
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 10% 2415/1062 RBT	
Result Name:	_GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 07 Dec 2015 10:19
Type of Test:	Waveform	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	



6 Voltage changes, voltage fluctuations and flicker

Tested by..... :	RBT	
Test date..... :	2015/12/07 and 2015/12/10	
Test Location (stand)..... :	EMC Shielded Room, SGS Tecnos, Madrid, Spain	
Test set-up description ..... :		
Test method..... :	☒	4.2.2 Flickermeter according IEC 61000-4-15
	☐	4.2.3 Simulation
	☐	4.2.4 Analytical method
	☐	4.2.5 Use of P_{st} = 1 curve
Observation time selected..... :	☐	10 Minutes
	☒	120 Minutes
	☒	24 times switching according to Annex B
Limit for dmax applied ..... :	☒	4 %
	☒	6 %
	☐	7 %
AC Mains voltage during test ..... :	230 V	
Supplementary information ..... :	--	

Operation mode	1
Mains voltage and frequency at which the test has been done	230 Vac 50 Hz
Verdict	Pass
Impedance used for measurement	Zref=0,40+j25

Product:	PROYECTOR LED	16 Dec 2015 13:39
Serial no:	--	Page 1 of 1
Description:	OPERATIVO AL 100% 2415/1062 RBT	
Result Name:	_GIPUZKOA LED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 07 Dec 2015 11:09
Type of Test:	Flickermeter Test - Table	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: PASS	Notes: Plt test duration 120 minutes Measurement method - Voltage	

	Plt
Limit	0.650
Reading	0.071

	Pst	dc (%)	dmax (%)	d(t) > 3.3%(ms)
Limit	1.000	3.300	4.000	500
Reading 1	0.071	0.017	0.067	0
Reading 2	0.071	0.017	0.075	0
Reading 3	0.071	0.017	0.075	0
Reading 4	0.071	0.017	0.075	0
Reading 5	0.071	0.017	0.081	0
Reading 6	0.071	0.017	0.067	0
Reading 7	0.071	0.017	0.075	0
Reading 8	0.071	0.017	0.067	0
Reading 9	0.071	0.017	0.075	0
Reading 10	0.071	0.017	0.075	0
Reading 11	0.071	0.017	0.075	0
Reading 12	0.071	0.017	0.081	0

Operation mode	8
Mains voltage and frequency at which the test has been done	230 Vac 50 Hz
Verdict	Pass
Impedance used for measurement	Zref=0,40+j0,25

Product:	PROYECTOR LED	16 Dec 2015 13:40
Serial no:	--	Page 1 of 1
Description:	OPERACIONES MANUALES ON/OFF 2415/1062 JCC	
Result Name:	GUIPUZKOALED/CMP.215.VE.29.C	
Voltech IEC1000-3 Windows Software 3.11.07		Test Date: 10 Dec 2015 12:58
Type of Test:	Manual Switching - Table	
Power Analyzer:	Voltech PM3000A v2.20 s/n 0723	
AC Source:	Mains / Manual Source	
Overall Result: **PASS**	Notes: Measurement method - Voltage	

Average dmax	0.7791
dmax limit	6

Result	dc	dt > dc	dmax	dmax pass / fail	included
1	0.146	0.000	0.822	Pass	✓
2	0.160	0.000	0.626	Pass	✓
3	0.146	0.000	1.064	Pass	✓
4	0.160	0.000	0.597	Pass	✓
5	0.154	0.000	0.734	Pass	✓
6	0.146	0.000	0.742	Pass	✓
7	0.154	0.000	1.085	Pass	✓
8	0.015	0.000	0.662	Pass	✓
9	0.154	0.000	0.705	Pass	✓
10	0.160	0.000	0.961	Pass	✓
11	0.154	0.000	1.012	Pass	✓
12	0.154	0.000	0.990	Pass	✓
13	0.154	0.000	0.894	Pass	✓
14	0.160	0.000	0.502	Pass	✓
15	0.146	0.000	0.720	Pass	✓
16	0.154	0.000	0.691	Pass	✓
17	0.154	0.000	0.610	Pass	✓
18	0.154	0.000	0.830	Pass	✓
19	0.154	0.000	2.664	Pass	✗
20	0.160	0.000	0.749	Pass	✓
21	0.160	0.000	0.581	Pass	✓
22	0.139	0.000	0.975	Pass	✓
23	0.154	0.000	0.502	Pass	✗
24	0.154	0.000	0.589	Pass	✓

7 Immunity

7.1 General information

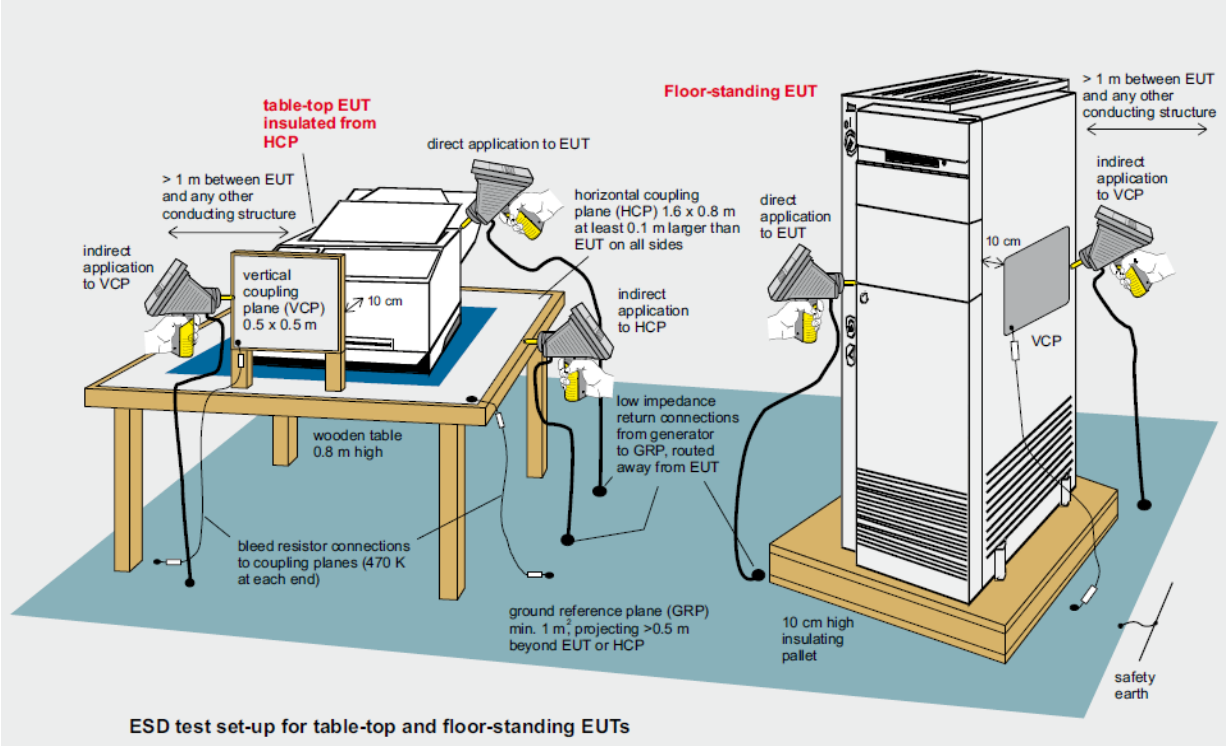
Performance criteria as defined by the standard	
Criterion	**Description from standard**
A	During the test, no change of the luminous intensity shall be observed and the regulating control, if any shall operate during the test as intended.
B	During the test, the luminous intensity may change to any value. After the test, the luminous intensity shall be restored to its initial value within 1 min. Regulating controls need not function during the test, but after the test, the mode of the control shall be the same as before the test provided that during the test no mode changing commands were given.
C	During and after the test, any change of the luminous intensity is allowed and the lamp(s) may be extinguished. After the test, within 30 min, all functions shall return to normal, if necessary by temporary interruption of the mains supply and/or operating the regulating control. Additional requirement for lighting equipment incorporating a starting device: After the test, the lighting equipment is switched off. After half an hour, it is switched on again. The lighting equipment shall start and operate as intended.
Other:	--

Manufacturer defined performance criteria..... :	Not defined by the applicant (Assumed standard criteria)
Monitoring during the tests ..... :	Monitoring method: Luminosity verified by a lux meter.

7.2 Electrostatic discharge

Tested by..... :	RBT	
Test date..... :		
Test Location(Stand) ..... :	EMC Shielded Room, SGS Tecnos, Madrid, Spain	
Test set-up..... :	☐	Table top equipment
	☐	Floor standing equipment
	☐	Wall or ceiling mounted equipment (Treated as table top)
Supplementary test set-up description ..... :	--	
Size of horizontal coupling plate.. :	1,6 x 0,8 m	
Size of vertical coupling plate:	0,5 x 0,5 m	
Number of discharges for each test point..... :	10	
Discharge interval..... :	1s	
Performance criterion ..... :	B	
Supplementary information ..... :	N/A: Not applicable. Equipment not accessible to the user. According applicant specifications the equipment is only accessible to the technical service not to the user.	

Test set-up..... :	



ESD test set-up for table-top and floor-standing EUTs

Photo of selected test points ..... :	

Table: Test results for electrostatic discharges

No.	Location of discharge	Polarity	Discharge	Number of discharges	Test level [kV]	Operating mode	Observations
1	HCP top side	P	C	10	4		N/A
2	HCP top side	N	C	10	4		
3	HCP bottom side	P	C	10	4		N/A
4	HCP bottom side	N	C	10	4		
5	VCP right side	P	C	10	4		N/A
6	VCP right side	N	C	10	4		
7	VCP left side	P	C	10	4		N/A
8	VCP left side	N	C	10	4		
9	Points on conductive surface as indicated in the picture above (Blue ray)	P	C	10	8		N/A
10	Points on conductive surface as indicated in the picture above (Blue ray)	N	C	10	8		
11	Points on non-conductive surface as indicated in the picture above (Red ray)	P	A	10	8		N/A
12	Points on non-conductive surface as indicated in the picture above (Red ray)	N	A	10	8		

HCP = Horizontal coupling plate N = Negative A = Air discharge
VCP = Vertical coupling plate P = Positive C = Contact discharge

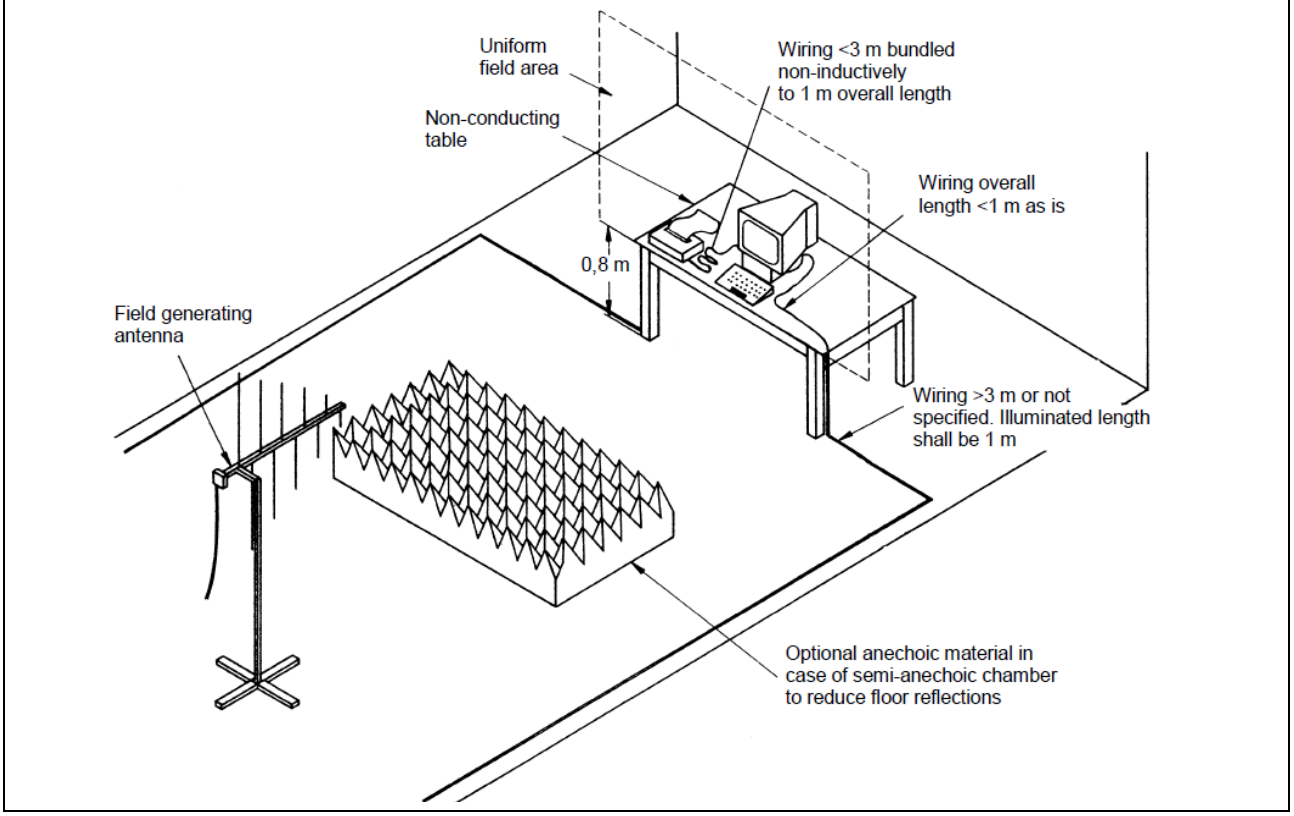
Supplementary information:

N/A: Not applicable. Equipment not accessible to the user. According applicant specifications the equipment is only accessible to the technical service not to the user.

7.3 Radio-frequency electromagnetic fields

Tested by..... :	RBT	
Test date..... :	2015/12/18	
Test set-up..... :	☒	Equipment on the table (0,8 m height)
	☐	Equipment standing on floor (0,05 – 0,15 m height)
Supplementary test set up description ..... :	--	
Exposed side of EUT..... :	☐	0° (Front)
	☐	90 °
	☒	180 ° (Rear)
	☐	270 °
Reason for not exposing a side... :	The electronic parts are situated at the rear of the equipment	
Distance Antenna to EUT..... :	3 m	
Step size [%]..... :	1	
Performance criterion ..... :	A	
Mains voltage / frequency during test..... :	230V / 50Hz	
Supplementary information ..... :	--	

Test set-up..... :	

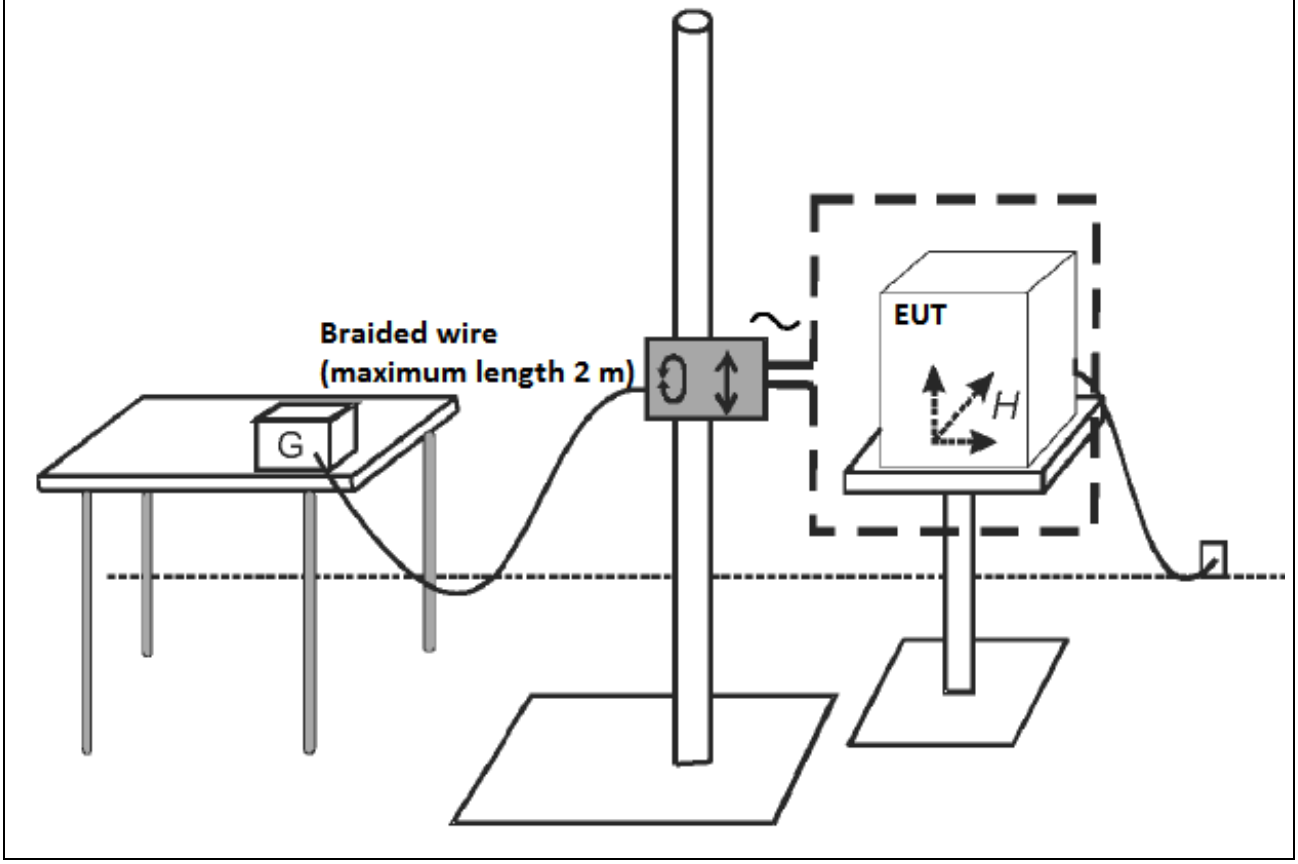


Test results for radiated electromagnetic field						
Frequency range	Test Level [V/m]	Polari-zation	Modulation	Operation mode	Dwell time [s]	Observations
80 to 1000	3	Vertical	80% AM 1 kHz	4	1	Pass No degradation or loss of function is appreciated
80 to 1000	3	Horizontal	80% AM 1 kHz	4	1	Pass No degradation or loss of function is appreciated
H = Horizontal V = Vertical						
Supplementary information: Monitoring method: Luminosity verified by a lux meter.						

7.4 Power frequency magnetic fields

Tested by..... :	RBT	
Test date..... :	2015/12/16	
Test location (Stand) ..... :	EMC Shielded Room, SGS Tecnos, Madrid, Spain	
Operating mode(s) used..... :	4	
Test set-up..... :	☐	0,1 m above metal surface
	☐	Homogeneous field (Helmholtz coil). Dimensions: ---
	☒	Single Coil. Dimensions: 1 x 1 m
	☐	Single Coil. Dimensions: 1 x 2,6 m
Performance criterion ..... :	A	
Reason for not performing the test ..... :	☐	The equipment contains no components which are susceptible to power frequency magnetic fields.
	☐	Other:
Supplementary information ..... :		

Test set-up..... :	

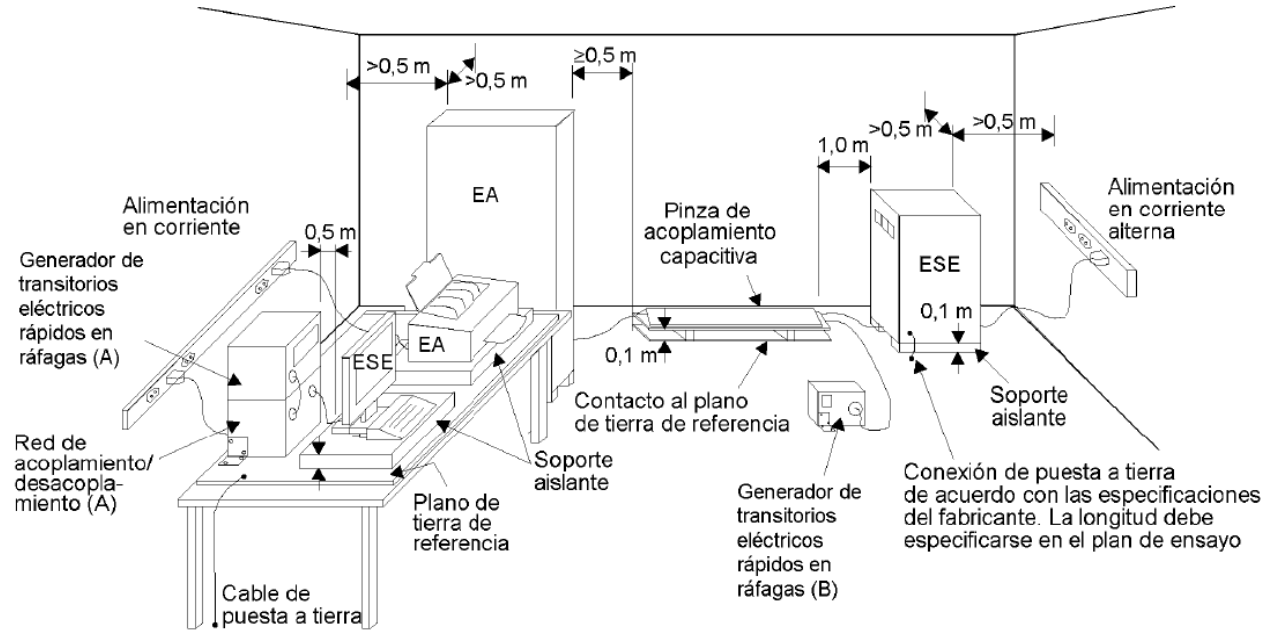


Test results for power frequency magnetic field immunity test							
Test frequency	Test Level [A/m]	Test time [s]	Coil size/type	Axis	Operating mode	Mains voltage/ frequency	Observations
50	*3*	*60*	*Single Coil 1x1 m*	*X*	*4*	*230 V~/ 50 Hz*	Pass No degradation or loss of function is appreciated
50	*3*	*60*	*Single Coil 1x1 m*	*Y*	*4*	*230 V~/ 50 Hz*	Pass No degradation or loss of function is appreciated
50	*3*	*60*	*Single Coil 1x1 m*	*Z*	*4*	*230 V~/ 50 Hz*	Pass No degradation or loss of function is appreciated
60	*3*	*60*	*Single Coil 1x1 m*		*4*	*230 V~/ 50 Hz*	Pass No degradation or loss of function is appreciated
60	*3*	*60*	*Single Coil 1x1 m*		*4*	*230 V~/ 50 Hz*	Pass No degradation or loss of function is appreciated
60	*3*	*60*	*Single Coil 1x1 m*		*4*	*230 V~/ 50 Hz*	Pass No degradation or loss of function is appreciated
Supplementary information: Monitoring method: Luminosity verified by a lux meter.							

7.5 Fast transients

Tested by..... :	RBT	
Test date..... :	2015/12/15	
Test location (stand)..... :	EMC Shielded Room, SGS Tecnos, Madrid, Spain	
Test set-up..... :	☒	Equipment on the table (0,1 ± 0,01) m above ground plane
	☐	Equipment standing on floor at (0,1 ± 0,01) m above ground plane
	☐	Artificial hand applied. Location see photo.
Supplementary test set-up description ..... :	--	
Repetition frequency ..... :	5 kHz	
Test time..... :	2 min	
Performance criterion ..... :	B	
Supplementary information ..... :		

Test set-up..... :	

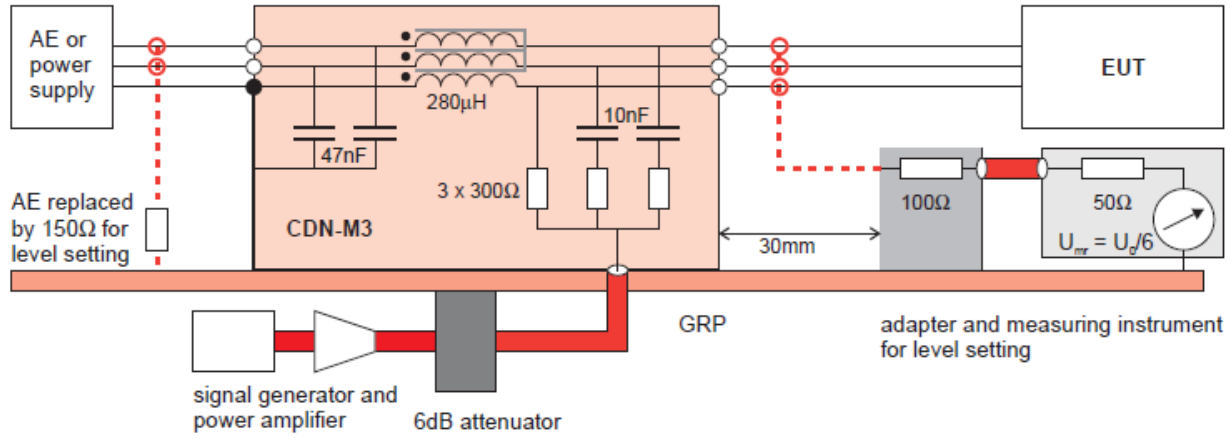


Test results fast transients						
Port	**Coupling**	**Level [kV]**	**Polarity**	**Operating mode**	**Mains voltage/ frequency**	**Observation**
Input AC power	CDN	1	+	4	230 V~/ 50 Hz	Pass No degradation or loss of function is appreciated
Input AC power	CDN	1	-	4	230 V~/ 50 Hz	Pass No degradation or loss of function is appreciated
Control lines	Capacitive clamp	0,5	+	4	230 V~/ 50 Hz	Pass No degradation or loss of function is appreciated
Control lines	Capacitive clamp	0,5	-	4	230 V~/ 50 Hz	Pass No degradation or loss of function is appreciated
Supplementary information: Monitoring method: Luminosity verified by a lux meter.						

7.6 Injected currents (radio-frequency common mode)

Tested by..... :	RBT	
Test date..... :	2015/12/16	
Test location (Stand) ..... :	EMC Shielded Room, SGS Tecnos, Madrid, Spain	
Test set-up..... :	☒	Equipment located (0,1 ± 0,05) m above ground plane
	☐	Elevated ground plane according to Annex F
	☐	Artificial hand applied. Location see photo.
Supplementary test set-up description ..... :		
Modulation ..... :	☒	80 % AM with 1 kHz
	☐	Other:
Step size..... :	1 %	
Performance criterion ..... :	A	
Mains voltage / frequency during test..... :	230 V / 50 Hz	
Supplementary information ..... :	Monitoring method: Luminosity verified by a lux meter.	

Test set-up for AC input ports ..... :



Test results for conducted disturbances, induced by radio-frequency fields

Frequency range	Test Level [V]	Port under test	CDN type	Port with terminated CDN	Operating mode	Dwell time [s]	Observations
0,15 – 80 MHz	3	AC Input port	M3	--	4	1	Pass No degradation or loss of function appreciated
0,15 – 80 MHz	3	Control lines	Injection clamp	--	4	1	Pass No degradation or loss of function is appreciated

Supplementary information: Monitoring method: Luminosity verified by a lux meter.

7.7 Surges

Tested by..... :	RBT
Test date..... :	2015/12/16
Test location(Stand) ..... :	EMC Shielded Room, SGS Tecnos, Madrid, Spain
Test set-up description ..... :	--
Repetition rate ..... :	1 min
Number of pulses for each coupling ..... :	5
Performance criterion ..... :	C
Supplementary information ..... :	

Test set-up..... :	Similar to Electrical Fast Transients for supply line coupling.

Test results for surges

Port	Coupling	CDN	Level [kV]	Po-larity	Phase angles [°]	Operating mode	Mains voltage/ frequency	Observation
AC Input	L-N	MCN	0,5	+	90	4	230V~/ 50Hz	Pass
	L-N	MCN	0,5	-	270	4	230V~/ 50Hz	Pass
	L-Earth	MCN	1,0	+	90	4	230V~/ 50Hz	Pass
	L-Earth	MCN	1,0	-	270	4	230V~/ 50Hz	Pass
	N-Earth	MCN	1,0	+	--	4	230V~/ 50Hz	Pass
	N-Earth	MCN	1,0	-	--	4	230V~/ 50Hz	Pass

Lower test levels..... :	☐	Tested
	☒	Not tested

P = Positive
N = Negative

MCN = Mains Coupling Network
ICN = Coupling Network for interconnection lines
D = Direct Coupling (shielded lines)

Supplementary information:
Monitoring method: Luminosity verified by a lux meter.

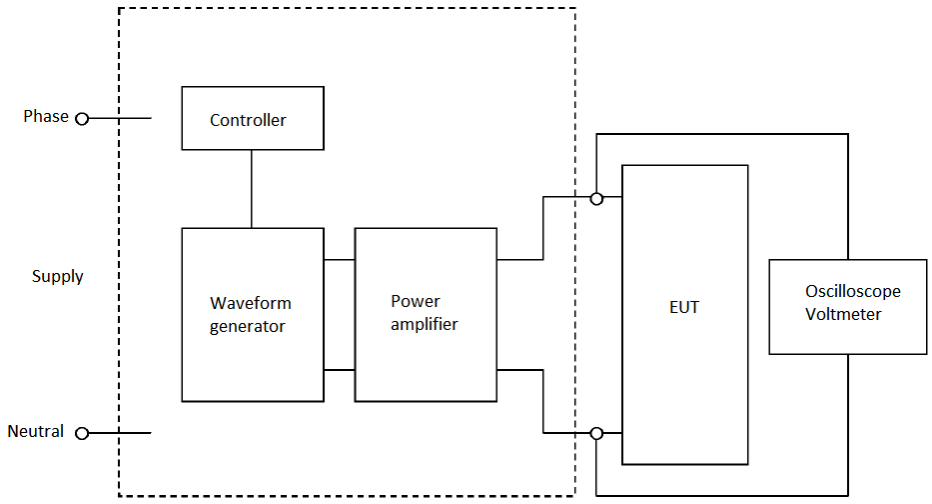
7.8 Voltage dips and short interruptions

Tested by..... :	RBT
Test date..... :	2015/12/16
Test Location (Stand) ..... :	EMC Shielded Room, SGS Tecnos, Madrid, Spain
Test set-up description ..... :	--
Repetition rate ..... :	10 s
Number of dips or interruptions ... :	3
Performance criterion ..... :	B (Voltage dips) C (Short interruptions UN= 0 %)
Supplementary information ..... :	

Test results voltage dips						
U_N [V]	Frequency in Hz	Test Level [% of U_N]	Phase angle	Duration [Cycles]	Operating mode	Observations
230	50	70	0	10	4	Pass
Supplementary information: Monitoring method: Luminosity verified by a lux meter.						

Test results voltage interruptions						
U_N [V]	Frequency [Hz]	Test Level [% of U_N]	Phase angle	Duration [Cycles]	Operating mode	Observations
230	50	0	0	0,5	4	Pass
230	50	0	180	0,5	4	Pass
Supplementary information:Monitoring method: Luminosity verified by a lux meter.						

Test set-up..... :



8 List of test equipment

Equipment used					
Equipment	**Type**	**Inventory number**	**Manufacturer**	**Last calibration date**	**Calibration due date ***
Test Stand:	**For all tests**				
Weather Station	Testo 622	DIE. 840051	TESTO	19/02/2015	19/02/2016
Test Stand:	**For all immunity tests**				
LUX METER	MAVOLUX	DIE. 720144	GOSSEN	22/06/2015	22/06/2018
Test Stand:	**Terminal disturbance voltage**				
EMI Receiver	ESPC	DIE.610003	ROHDE&SCHWARZ	16/01/2015	16/01/2016
LISN	ESH2-Z5	DIE.600002	ROHDE & SCHWARZ	22/05/2015	22/05/2016
Pulse Limiter	ESH3-Z2	DIE.611009	ROHDE & SCHWARZ	20/02/2015	20/02/2017
Test Stand:	**Radiated emission**				
EMI Receiver	ESPC	DIE.610003	ROHDE&SCHWARZ	16/01/2015	16/01/2016
Bilog Antenna	AH SYSTEMS	DIE.610188	SAS-521F-7	--	--
Test Stand:	**AC Mains Harmonics**				
AC Power supply	360-AMX	DIE.501020	PACIFIC	25/06/2015	13/07/2017
Power analyser	PM3000A	DIE.600003	VOLTECH	27/11/2015	27/11/2016
Test Stand:	**AC Mains Voltage fluctuation and flicker (DC – 2 kHz)**				
AC Power supply	360-AMX	DIE.501020	PACIFIC	25/06/2015	13/07/2017
Flicker meter	PM3000A	DIE.600003	VOLTECH	27/11/2015	27/11/2016
Series impedance network	IEC555	DIE.600003	VOLTECH	27/11/2015	27/11/2016
Test Stand:	**Electrostatic discharge according IEC 61000-4-2**				
ESD 0-30 KV	ONYX30	DIE.500150	HAEFELY	12/01/2015	12/01/2017
Test Stand:	**Fast transients acc. IEC 61000-4-4**				
EFT Generator	TRA-3000	DIE.580100-1	EMC PARTNER	31/07/2015	10/08/2016
Test Stand:	**Injected currents (radio frequency common mode) IEC 61000-4-6**				
Signal generator	3030-1	DIE.520200	PMM	10/12/2015	10/06/2016
RF Amplifier	FLL-25	DIE.431108	FRANKONIA	28/08/2014	28/08/2016
Supply line coupling network	FCC-801-M3-25	DIE.600005	FCC	14/11/2014	14/11/2016
Injection clamp	EM 101	DIE. 610190	LITHI	12/12/2013	12/12/2015
Test Stand:	**Radio-frequency electromagnetic fields IEC 61000-4-3**				
RF Amplifier	FLH-70B	DIE.431115-A	FRANKONIA	01/07/2015	01/07/2017
Signal Generator	3030-1	DIE.520200	PMM	10/12/2015	10/06/2016
Electromagnetic field meter	EMR-300	DIE.550012	WANDEL & GOLTERMANN	22/09/2015	22/09/2016
Test Stand:	**Surges acc. IEC 61000-4-5**				
SURGE Generator	TRA-3000	DIE.580100-4	EMC PARTNER	31/07/2015	10/08/2016
Test Stand:	**Voltage dips and short interruptions acc. IEC 61000-4-11**				
AC Power supply	360-AMX	DIE.501020	PACIFIC	25/06/2015	13/07/2017
Test Stand:	**Power frequency magnetic fields. IEC 61000-4-8**				
SQUARE COIL	--	DIE. 550007	SGS	15/07/2014	14/07/2016
ELECTROMAGNETIC FIELD METER	HI-3604	DIE. 550003	HOLADAY	07/07/2015	07/07/2016

* Calibration interval extended based on sufficient calibration data and experience of use (see CTL-OP111 Ed.2.0 sub-clause 6.2.5c)

9 Measurement instrumentation uncertainties

Conducted disturbances			
Type of disturbance test method	**Used test equipment (only main instruments, no details)**	**Calculated uncertainty**	**U_{CISPR}**
Disturbance voltage Mains terminals 9 kHz … 150 kHz 150 kHz … 30 MHz	EMI Receiver LISN Pulse limiter	± 3 dB	4.0 dB 3.6 dB
Disturbance voltage Unsym. load terminals and others 150 kHz … 30 MHz	EMI Receiver LISN Pulse limiter	± 3 dB	not specified
Disturbance power Power cables and others 30 MHz … 300 MHz	EMI Receiver LISN Absorbing clamp	± 3 dB	4.5 dB
Radiated disturbances			
Type of disturbance test method	**Used test equipment (only main instruments, no details)**	**Calculated uncertainty**	**U_{CISPR}**
Magnetic field strength 9 kHz … 30 MHz		N/A	not specified
Magnetic field strength (Induced RF current) 9 kHz … 30 MHz		N/A	not specified
Electric field strength Horiz. 30 MHz … 200 MHz Horiz. 200 MHz … 1000 MHz Vert. 30 MHz … 200 MHz Vert. 200 MHz … 1000 MHz	EMI Receiver Bilog. Antenna	± 5 dB	5.2 dB
Electric field strength 1 GHz … 3.5 GHz 3.5 GHz … 7 GHz 7 GHz … 18 GHz		N/A	not specified
The calculated numbers are valid for the expanded uncertainty (k=2) of measurements that have been carried out in accordance with the provisions of the relevant parts of CISPR 16.			

Harmonic currents (50 Hz … 2000 Hz) and Flicker			
Type of disturbance test method	**Used test equipment (only main instruments, no details)**	**Calculated uncertainty**	**U_{CISPR}**
Harmonic currents EN 61000-3-2 EN 61000-3-12	AC Power supply Power analyser	± 2,91 %	not applicable
Flicker EN 61000-3-3 EN 61000-3-11	AC Power supply Flicker meter Series impedance network	dc = ± 3,22 % dmax= ± 3,22 % Plt= ± 2,74 % Pst= ± 2,74 %	not applicable
(*) The values presented in the above table were provided by the manufacturer of the measurement system. The publication of the manufacturer does not indicate whether these values are expanded uncertainties or not. An expansion factor was not provided with the data.			

Uncertainties of immunity measurements:

There is no procedure how to deal with the results of immunity uncertainty calculations during the testing. Therefore the uncertainties of the immunity test set-ups have not been published here. All instrumentation used for immunity tests is calibrated and within the specifications required by the basic standards (IEC 61000-4-X).

Supplementary information:

Measurement uncertainties associated with other parameters variables determined during tests are available from the Laboratory at Customer's request.

10 Annex

10.1 Critical components table

	Table: Critical components information		
Object	Manufacturer/ Trademark	Type/Model	Remark
Not considered applicable			

10.2 Type designation code

No type designation code provided.