Report No. E08601.04

EMC File

Product	Induction Hob for building-in
Name and address of the applicant	Tecnowind SpA Piani di Marischio, 19 I-60044 Fabriano (AN) ITALY
Name and address of the manufacturer	Tecnowind SpA Piani di Marischio, 19 I-60044 Fabriano (AN) ITALY
Model	Type PI29.. .. ..Family
Rating	3700W 220-240V AC or 380-415V 2N 50/60Hz
Brand name	Tecnowind
Serial number	-
Additional information	Cl.I
Tested according to	EN 55014-1 (2006) + A1 (2009) + A2 (2011) EN 61000-3-2 (2006) + A1 (2009) + A2 (2009) EN 61000-3-3 (2008) EN 55014-2 (1997) + A1 (2001) + A2 (2008)
Order number	226187
Tested in period	2007-10-31 to 2007-11-02 and 2011 March
Issue date	2012-12-05
Name and address of the testing laboratory	Nemko P.O. Box 73 Blindern, N-0314 Oslo, Norway Telephone (+47) 22 96 03 30 Fax (+47) 22 96 05 50

Prepared by [Lam Anh Dung]	Approved by [Roger Berget]

REVISIONS

Revision #	Date	Order #	Description
00	2007-11-05	94012	Individual Nemko Norway report
01	2008-12-12	117251	First issue of this report based on previous work of the above reports
02	2010-11-25	160844	Update to latest standard versions. No additional test needed.
03	2011-04-05	168231	Additional tests due to add 2 new models XO3400 and XO3700 with new components (see page 5 and components list for details)
04	2012-12-05	226187	Update to latest standard versions. No additional test needed.

GENERAL REMARKS

This report applies only to the sample(s) tested. It is the manufacturer's responsibility to assure the additional production units of this product are manufactured with identical electrical and mechanical components. The manufacturer is responsible to the Competent Authorities in Europe for any modifications made to the product, which result in non-compliance to the relevant regulations.

This report shall not be reproduced except in full without the written approval of Nemko.

Opinions expressed within this report regarding general assessments and qualifications for **PASS** or **FAIL** to the standards limits and requirements, are not part of the current accreditation. Neither is opinions expressed regarding model variants covered by the testing of this report.

CALIBRATION

All instruments used in the tests given in this test report are calibrated and traceable to national or international standards. Between calibrations all test set-ups are controlled and verified on a regular basis.

The instruments specified in immunity testing are subject to periodic calibration. Monthly controls ensure, with 95% confidence that the instruments remain within the calibrated levels.

MEASUREMENT UNCERTAINTY

Measurement uncertainties are calculated or considered for all instruments and instrument set-ups used during these tests. Uncertainty figures are found in an appendix to this report.

Further information about measurement uncertainties is provided on request.

EVALUATION OF RESULTS

If not explicitly stated otherwise in the standard, the test is passed if the measurement value is equal to or below the limit line, regardless of the uncertainty of the measurement. If the measurement value is above the limit line, the test is not passed - ref. IECEE/CTL (Sec) 056/94 (CTL = Committee of Testing Laboratories).

The instrumentation accuracy is within limits agreed by the IECEE/CTL (ref. Nemko proc. P227).

TABLE OF CONTENTS

EQUIPMENT UNDER TEST (EUT)

SYSTEM DESCRIPTION

Family of hobs for building-in, with timer and safety lock functions.

MODEL VARIATIONS

This report also covers the following model/types:

VA no.	Type	Model	Rated power input	Rated voltage	Investigated
1	PI29	EO3700	3,7kW	220-240V AC	Yes
2	PI29	XO3400	3,4kW	220-240V AC/ 380-415V AC	Yes
3	PI29	XO3700	3,7kW	220-240V AC/ 380-415V AC	Yes
Notes:					

Explanation of the type and reference:

PI: hob for build-in (Piano) Induction Hob

PI29: Induction hobs, 29cm wide.

First two dots:

EO: Electronic regulator, horizontal
EV: Electronic regulator, vertical
EC: Electronic regulator, central position
XC: New induction hobs, electronic regulator, central position

Last four dots:

Rated power input in watts.

PORTS AVAILABLE

This equipment is fitted with the following electrical ports.

PO no.	Port Name	Type	Count	Comment
1	AC Input Port	230V AC	1	-
Notes:				

AVAILABLE OPERATING MODES

The following functional operating modes are available and are considered applicable under intended use.

FU no.	Operating mode	Comment	Investigated
1	Heating	-	Yes
2	Standby	-	No
Notes:			

ADDITIONAL INFORMATION RELATED TO TESTING

This file is built from different individual EMC test reports, which were issued based on tests previously performed on several models in this family, to cover the critical components expected to interfere with its EMC properties. This files serves as a full test file for all components qualified through the years, and collects all these test data into one single report. The first part of the test section contains descriptions of the testing levels and results obtained generally for the family, while the Annex contains individual measurement chapters for each test session performed to one or more of the family members.

GENERAL TEST CONDITIONS

TEST LABORATORY

The following Nemko test sites have been utilized for the tests documented in this report:

	Site	Adress
X	**GAUSTAD**	Gaustadalleen 30, N-0314 Oslo, Norway
X	**SKAR**	Maridalsveien 621, N-0890 Oslo, Norway
	KJELLER	Instituttveien 6, N-2007 Kjeller, Norway
	ITALY	Via Trento e Trieste, 116 I-20046 Biassono MI (Italy)

POWER SUPPLIED TO EUT

Filtered electrical power was available for operation of EuT in all the test sites.

Voltage type: 230V AC 50Hz
Grounding: Grounded through its power connection.

AMBIENT CONDITIONS

All tests and measurements were performed in a shielded enclosure or a controlled environment suitable for the tests conducted.

The climatic condition in the laboratory environment was according to EN 60068-1 (1988) + A1 (1992):

Ambient temperature	23°C (EN 60068-1: 15 - 35°C)
Relative humidity	45%RH (EN 60068-1: 25 - 75%RH)
Atmospheric pressure	100kPa (EN 60068-1: 86 – 106kPa)

Note: The climatic conditions in the test areas are automatically controlled and recorded continuously.

EVALUATION OF PERFORMANCE

FUNCTIONS MONITORED DURING IMMUNITY TESTS

In order to verify acceptable performance by the EuT during the applied tests, the following functions were monitored:

#	Function	Monitoring method
1	Heating	Visual
2	Timer	Visual
Notes:		

FUNCTIONAL CHECKS

A verification of correct function was performed before, during and after each test, by the following tests:

#	Functional tests
1	Heating, timer and safety lock function was tested before and after each tests to verify normal behavior.
Notes:	

PERFORMANCE CRITERIA

In order to pass each test, the EuT shall meet the following criteria:

Criteria	General description	Criteria modified by manufacturer
A	The device shall continue to operate as intended both during and after the test. No degradation of performance or loss of function is allowed below the expected performance level of the device	-
B	The device shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below the expected performance level of the device	-
C	Temporary loss of function during test is allowed, provided the function is self-recoverable or can be restored by the operation of the controls	-
Notes:		

SUMMARY OF TESTING

APPLIED STANDARDS

» **EN 55014-1 (2006) + A1 (2009) + A2 (2011)** — *Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus -- Part 1: Emission*

» **EN 61000-3-2 (2006) + A1 (2009) + A2 (2009)** — *Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)*

» **EN 61000-3-3 (2008)** — *Electromagnetic compatibility (EMC) -- Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection*

» **EN 55014-2 (1997) + A1 (2001) + A2 (2008)** — *Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus -- Part 2: Immunity - Product family standard*

APPLIED TESTS

Test items	Test methods	Result
Mains Port Disturbance Voltage	EN 55014-1 (2006) + A1 (2009) + A2 (2011)	PASS
Loads Port Disturbance Voltage	EN 55014-1 (2006) + A1 (2009) + A2 (2011)	NA
Discontinuous Disturbance Voltage	EN 55014-1 (2006) + A1 (2009) + A2 (2011)	PASS
Disturbance Power	EN 55014-1 (2006) + A1 (2009) + A2 (2011)	NA
Radiated Electromagnetic Field (3-loop)	EN 55014-1 (2006) + A1 (2009) + A2 (2011)	PASS
Radiated Disturbance (30-1000MHz)	EN 55014-1 (2006) + A1 (2009) + A2 (2011)	PASS
Harmonics	EN 61000-3-2 (2006) + A1 (2009) + A2 (2009)	PASS
Flicker	EN 61000-3-3 (2008)	PASS
Electrostatic Discharges	EN 55014-2 (1997) + A1 (2001) + A2 (2008) EN 61000-4-2 (2009), Ed.2.0	PASS
Radiated RF Field	EN 55014-2 (1997) + A1 (2001) + A2 (2008) EN 61000-4-3 (2008), Ed.3.1	NA
Electric Fast Transients	EN 55014-2 (1997) + A1 (2001) + A2 (2008) EN 61000-4-4 (2010), Ed.2.1	PASS
Surge	EN 55014-2 (1997) + A1 (2001) + A2 (2008) EN 61000-4-5 (2006), Ed.2.0	PASS
Conducted RF Disturbance	EN 55014-2 (1997) + A1 (2001) + A2 (2008) EN 61000-4-6 (2009), Ed.3.0	PASS
Dips/Interruptions	EN 55014-2 (1997) + A1 (2001) + A2 (2008) EN 61000-4-11 (2004), Ed.2.0	PASS

PASS : Tested and complied with the requirements
FAIL : Tested and failed the requirements
NA : Test not relevant to this specimen (evaluated by the test laboratory)
– : Test not performed (instructed by the applicant)
* : An asterisk (*) placed after the verdict in the Result column indicates test items that are not within Nemko's scope of accreditation

#	:	A grid (#) placed after the verdict in the Result column indicates test items that are only partly covered by Nemko's scope of accreditation. Further information is detailed in the test section

DEVIATIONS AND EVALUATIONS

Nemko has not recorded any deviations to the applied standards.
Nemko has made no general evaluations.

Test Results

EMISSION – MAINS PORT DISTURBANCE VOLTAGE

TEST DESCRIPTION

Method
The reference method for this test is listed in the table under clause APPLIED TESTS.

Set-up
The measurements were performed in a shielded enclosure. EuT was connected to an Artificial Mains Network (AMN) and placed on a wooden table 10cm (floor-standing) or 80cm (tabletop) above the grounded floor and 40cm from the reference ground plane (wall). EuT was connected to the AMN by its power cable, which was adjusted to 100cm length by folding.

Procedure
A screening test was first performed to decide the most disturbing operating mode of the EuT, maximizing the cable layout and deciding the proper dwell time for the measurements.

Then measurements were run between each of the current carrying wires of the power cord, and ground.

The frequency was swept in the range specified under Severity.

A comparison of the results obtained from the different wires was then performed to find the highest level at each frequency. This worst-case sweep with peak detector is presented below.

At the frequencies where the peak level of the emission was exceeding the applicable [limit - offset], the emission was also measured with the quasi-peak detector and, if required, with the average detector.

Instruments used during measurement
Instrument lists are found in the Annex for each test session.

Comments
No recorded comments.

Severity	
Port:	AC Input Port
Frequency range:	0.009 - 30 MHz
Frequency step:	5 kHz
Dwell time:	20 mSec
Bandwidth:	10 kHz

Conformity	
Verdict:	Pass
Test engineer:	Jørn Gustavsen

CONCLUSION
The EuT complied with the limits specified in the reference standard. Measurement data is presented in the Annex to this report

EMISSION – DISCONTINUOUS DISTURBANCE VOLTAGE

TEST DESCRIPTION

Method
CISPR 16-2-1 Ed.1.1 (2005)
Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-1: Methods of measurement of disturbances and immunity - Conducted disturbance measurements.
CISPR 14-1 (2000) + A1 (2001) + A2 (2002)
Electromagnetic compatibility – Requirements for household appliances, electric tools, and similar apparatus – Part 1: Emission.

Set-up
The measurements were performed in a shielded enclosure. EuT was connected to an Artificial Mains Network (AMN) and placed on a wooden table 10 cm (floor standing) / 80 cm (tabletop) above the grounded floor and 40 cm from the reference ground plane (wall). EuT was connected to the AMN via a 100 cm mains cable.

Procedure
Initially an observation of 40 detected clicks was made (or a maximum of 2 hours), measuring at 150 kHz and 500 kHz with a quasi-peak detector. Each click exceeding the quasi-peak limit was counted and then analysed to decide whether it should be classified as Short Click (T < 20 ms), Long Click (20 ms < T < 200 ms) or Continuous (T > 200 ms).

(Continuous noise lasting for more than 600 ms, accumulated during the whole observation period makes the EuT fail this test.)

Based on the counted value(s) from the observation period, an offset was added to the initial limit values. The calculated CLICK RATE was used to calculate the size of the offset (ref. CISPR 14-1, §7.4.2).

A final measurement was then initiated (with a measurement time of the same length as the observation); measuring clicks at 150 kHz, 500 kHz, 1.4 MHz and 30 MHz with a quasi-peak detector. The final CLICK RATE at each frequency was not allowed to exceed ¼ of the CLICK RATE found during the observation period, when using the new limit values.

Measurements were made between each of the current carrying wires of the power port, and ground.

Instruments used during measurement
Instrument lists are found in the Annex for each test session.

Comments
No recorded comments.

Severity		**Conformity**	
Port:	AC Input Port	Verdict:	Pass
		Test engineer:	Jørn Gustavsen

CONCLUSION
The EuT complied with the limits specified in the reference standard. Measurement data is presented in the Annex to this report

EMISSION – RADIATED ELECTROMAGNETIC FIELD

TEST DESCRIPTION

Method
The reference method for this test is listed in the table under clause APPLIED TESTS.

Set-up
The measurements are performed in a 2-meter triple-loop antenna. EuT is connected to an Artificial Mains Network (AMN). The AMN is located on the ground reference plane more than 50 cm away from the antenna. EuT is placed on a wooden table in the centre of the triple-loop antenna (150 cm above ground).

Procedure
A screening test was first performed to decide the most disturbing operating mode of the EuT, maximizing the cable layout and deciding the proper dwell time for the measurements.

Measurements are then made in 3 perpendicular axes (X, Y, and Z) by the three loop antennas.

The frequency is swept in the range specified under Severity.

A comparison of the results obtained from the three planes is then performed to find the most disturbing axis at each frequency. This "Worst Case" sweep with peak detector is presented below.

At the frequencies where the peak values of the emission are exceeding the applicable [limit - offset], the emission is also measured with the quasi-peak detector and, if required, with the average detector.

Instruments used during measurement
Instrument lists are found in the Annex for each test session.

Comments
No recorded comments.

Severity	
Port:	Enclosure Port
Frequency range:	9 kHz – 30 MHz
Frequency step:	100 Hz / 5 kHz
Dwell time:	50 mSec / 20 mSec
Bandwidth:	200Hz / 10 kHz

Conformity	
Verdict:	Pass
Test engineer:	Jørn Gustavsen

CONCLUSION
The EuT complied with the limits specified in the reference standard. Measurement data is presented in the Annex to this report

EMISSION – RADIATED DISTURBANCE

TEST DESCRIPTION

Method
The reference method for this test is listed in the table under clause APPLIED TESTS.

Set-up
A preliminary test is performed in an anechoic chamber. EuT is connected to filtered mains supply and placed on a wooden table 10 cm (floor-standing) / 80 cm (tabletop) above the floor. The measuring antenna was located 3 meters from EuT.
The final measurements are performed on an open area test site (OATS). EuT is connected to filtered mains supply and placed on a wooden table 10 cm (floor-standing) / 80 cm (tabletop) above the groundplane, in the centre of the turntable. The measuring antenna is located 3/10 meters from EuT.

Procedure
A screening test was first performed to decide the most disturbing operating mode of the EuT, maximizing the cable layout and deciding the proper dwell time for the measurements.

A preliminary test is then run in the anechoic chamber, both for horizontal and vertical polarization of the antenna, and at 0°, 90°, 180° and 270° turntable azimuth (antenna height 100 cm).

The frequency is swept in the range specified under Severity.

A comparison of the levels measured at each measurement positions is then made, and the highest level at each frequency is stored. This "Worst Case" sweep with peak detector is presented in the report.

At the frequencies where the peak values of the emission are exceeding the applicable [limit - offset], the emission is also measured with the quasi-peak detector on the OATS. Cables connected to EuT are fixed to cause maximum emission.

A maximum emitting point for each frequency is found by rotating EuT 360°, and sweep the antenna height between 100 cm and 400 cm.

A quasi-peak detector measurement is then performed at the maximum emitting point. The emission level is calculated in the following matter: Elevel = Ereading + Eantenna + Ecable

Instruments used during measurement
Instrument lists are found in the Annex for each test session.

Severity	
Port:	Enclosure Port
Frequency range:	30 MHz – 1000 MHz
Frequency step:	80 kHz
Dwell time:	20 mSec
Bandwidth:	120 kHz
Meas. distance:	10meter

Conformity	
Verdict:	Pass
Test engineer:	Jørn Gustavsen

CONCLUSION
The EuT complied with the limits specified in the reference standard. Measurement data is presented in the Annex to this report

POWER QUALITY – HARMONIC DISTORTION

TEST DESCRIPTION

Method
EN 61000-3-2 (2006)
Electro-magnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase).

Set-up
EuT is connected to the Power Analyser system. A steady and undistorted AC mains is supplied to the EuT from a power supply matrix.

Procedure
10 seconds after the energizing of the EuT, the current harmonics is monitored for the time specified below. Measurements are run on all active phases, searching for current harmonics 1st to 40th of the mains frequency (50 Hz or 60 Hz).
An overview of the harmonic emission is presented as numeric and as graphics below.

Instruments used during measurement
Instrument lists are found in the Annex for each test session.

Comments
No recorded comments.

Severity		**Conformity**	
Port:	AC Input Port	Verdict:	Pass
Class identifier:	A	Test engineer:	Jørn Gustavsen
Duration:	2,5Min		

CONCLUSION
The EuT complied with the limits specified in the reference standard. Measurement data is presented in the Annex to this report

POWER QUALITY – FLICKER

TEST DESCRIPTION

Method
EN 61000-3-3 (1995) + A1 (2001) + A2 (2005)
Electro-magnetic compatibility (EMC) – Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.

Set-up
EuT was connected to the Power Analyser system. A steady and undistorted AC mains was supplied to the EuT from an ideal power supply matrix. The power supply provided standardized mains impedance by means of synthetic programmable impedances.

Procedure
Measurements were performed to monitor the required flicker parameters. The measuring time depends on which parameters are measured:

- 2 hours when Long Time Flicker assessment (Plt) is to be made.
- 10 minutes when Short Time Flicker assessment (Pst) is to be made
- 1 or 10 minutes when only Dmax, Dc and Dt is to be assessed (depending on EuT switch-rate)

A measurement table and a graphic presentation of the probability function of Short Time Flicker during this session. (if measured) are presented in the report.

Instruments used during measurement
Instrument lists are found in the Annex for each test session.

Comments
No recorded comments.

Severity		**Conformity**	
Port:	AC Input Port	Verdict:	Pass
Duration:	10min	Test engineer:	Jørn Gustavsen

CONCLUSION

The EuT complied with the limits specified in the reference standard. Measurement data is presented in the Annex to this report

IMMUNITY – ELECTROSTATIC DISCHARGES

TEST DESCRIPTION

Method
EN 61000-4-2 (1995) + A1 (1998) + A2 (2001)
Electromagnetic compatibility (EMC) -- Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test.

Set-up
A ground reference plane is located on the floor, and connected to earth via a low impedance connection. The return cable of the EFT generator is connected to the reference plane.

EuT is placed on a wooden table 10 cm (floor standing) / 80 cm (tabletop) above the reference plane, and all cables attached to the EuT is isolated the same way.

A vertical coupling plane (VCP) of 50x50 cm is placed 10 cm from the EuT's exterior. This VCP is connected to the reference plane via a cable with two 470kΩ resistors located one in each end of the cable.

In case of tabletop equipment, a horizontal coupling plane (HCP) of 160x80 cm is located on the table, and connected to the reference plane the same way as the VCP. EuT is separated from the HCP by a 0.5mm insulating support.

Procedure
Direct contact and air discharges are applied to the EuT enclosure. Indirect contact discharges are applied to the mid edge of the HCP and VCP.

Contact discharges are applied to various selected test points of the EuT at conductive surfaces, and to the HCP and VCP. Air discharges are applied to various selected test points of the EuT at non-conductive surfaces.

Discharges are applied at increasing levels to each test point.

Instruments used during measurement
Instrument lists are found in the Annex for each test session.

Comments
No recorded comments.

Severity		**Conformity**	
Port:	Enclosure Port	Verdict:	Pass
		Test engineer:	Jørn Gustavsen

DETAILED TEST LOG

Note: The choice of test levels could differ from the procedure, based on the nature of EuT.
Note: An asterisk (*) indicates tests not within the scope of accreditation.
Note: Possible test case performances: <space> = Not tested, or letters indicating level of performance (clause 6.2).

Test Point	Applied Level [kV]	Discharge Type	Discharges per test level	Required Criteria	Complied Criteria	Result
Top Plate	±4, ±8	Air	10	B	A	PASS
Buttons	±4, ±8	Air	10	B	A	PASS
Display	±4, ±8	Air	10	B	A	PASS
HCP	±2, ±4	Contact	10	B	A	PASS
VCP	±2, ±4	Contact	10	B	A	PASS

CONCLUSION

No operation errors were detected during or after the applied test(s)

IMMUNITY – ELECTRIC FAST TRANSIENTS

TEST DESCRIPTION

Method
EN 61000-4-4 (1995) + A1 (2001) + A2 (2001)
Electromagnetic compatibility (EMC) -- Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test.

Set-up
A ground reference plane is located on the floor, and connected to earth via a low impedance connection. The EFT/B generator's reference ground is connected to the reference plane.

EuT is placed on a wooden table 10 cm (floor standing) / 80 cm (tabletop) above the reference plane, and all cables attached to the EuT is isolated the same way.

Procedure
Transients are applied at increasing levels to each single line at the AC or DC mains port using a coupling network, and other remaining ports using a capacitive coupling clamp.

Instruments used during measurement
Instrument lists are found in the Annex for each test session.

Comments
No recorded comments.

Severity		**Conformity**	
Port:	AC Input Port	Verdict:	Pass
Duration:	2min	Test engineer:	Jørn Gustavsen

DETAILED TEST LOG

Note: The choice of test levels could differ from the procedure, based on the nature of EuT.
Note: An asterisk (*) indicates tests not within the scope of accreditation.
Note: Possible test case performances: <space> = Not tested, or letters indicating level of performance (clause 6.2).

Port	Applied Level [kV]	Injection Method	Required Criteria	Complied Criteria	Result
AC Input Port (N)	±0.5, ±1	CDN	B	A	PASS
AC Input Port (L1)	±0.5, ±1	CDN	B	A	PASS
AC Input Port (PE)	±0.5, ±1	CDN	B	A	PASS
AC Input Port (All at once)	±0.5, ±1	CDN	B	A	PASS

CONCLUSION
No operation errors were detected during or after the applied test(s)

IMMUNITY – SURGE

TEST DESCRIPTION

Method
EN 61000-4-5 (1995) + A1 (2001)
Electromagnetic compatibility (EMC) -- Part 4-5: Testing and measurement techniques - Surge immunity test.

Set-up
The surge generator is connected to earth via a low impedance connection. No presence of an earth/reference plane is necessary. The surge test is only applicable to AC mains.

Procedure
For each test level and for each wire tested, the surges are applied at different phase angles, usually with 90° steps.

Differential mode surges are applied live-to-neutral and live-to-live, with a source impedance of 2Ω.
Common mode surges are applied line-to-ground and neutral-to-ground, with a source impedance of 12Ω.

The surges are applied with time intervals of 60 seconds.

Instruments used during measurement
Instrument lists are found in the Annex for each test session.

Comments
No recorded comments.

Severity		**Conformity**	
Port:	AC Input Port	Verdict:	Pass
Intervals:	60sec	Test engineer:	Jørn Gustavsen

DETAILED TEST LOG

Note: The choice of test levels could differ from the procedure, based on the nature of EuT.
Note: An asterisk (*) indicates tests not within the scope of accreditation.
Note: Possible test case performances: <space> = Not tested, or letters indicating level of performance (clause 6.2).

Wire	Phase angle [deg]	Applied Level [kV]	Tests per level	Required Criteria	Complied Criteria	Result
AC Input Port (N to PE)	0°, 90°, 180°, 270°	±0.5, ±1, ±2	5	B	A	PASS
AC Input Port (L1 to PE)	0°, 90°, 180°, 270°	±0.5, ±1, ±2	5	B	A	PASS
AC Input Port (N to L1)	0°, 90°, 180°, 270°	±0.5, ±1, ±2	5	B	A	PASS

CONCLUSION
No operation errors were detected during or after the applied test(s)

IMMUNITY – CONDUCTED RF DISTURBANCE

TEST DESCRIPTION

Method
EN 61000-4-6 (1996) + A1 (2001)
Electromagnetic compatibility (EMC) -- Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields.

Set-up
The test is performed on a 2 x 2 meter ground reference plane.

EuT is placed on a wooden table 10 cm above the reference plane. Cables for AC mains and cables going to and from support equipment plus interconnecting cables are isolated from the ground plane by a 5 cm isolating support.

Procedure
Disturbance is applied via a coupling/decoupling network (CDN) or a capacitive coupling clamp (EM Clamp) to each port separately.

All ports on EuT not subject to testing are furnished with decoupling networks to achieve 150 Ω termination of the EuT during test. As decoupling networks Nemko use the CDNs normally used to apply the disturbance, the CDNs input port is terminated with a 50 Ω termination to make them act as true decoupling networks.

For AC ports, DC ports, coax lines and 2- or 4-lines balanced communication lines a CDN is used to apply the disturbance. On other multiple signal cables an EM Clamp is used to apply the disturbance.
A signal level/type as specified below is applied in the defined frequency range. The frequency is swept through the range with a step width and a dwell time per frequency as specified below.

Instruments used during measurement
Instrument lists are found in the Annex for each test session.

Comments
No recorded comments.

Severity	
Port:	AC Input Port
Frequency range:	0.15 - 230MHz
Step size:	1 %
Dwell time:	3 Sec
Modulation:	80% AM @ 1 kHz

Conformity	
Verdict:	Pass
Test engineer:	Jørn Gustavsen

DETAILED TEST LOG

Note: The choice of test levels could differ from the procedure, based on the nature of EuT.
Note: An asterisk (*) indicates tests not within the scope of accreditation.
Note: Possible test case performances: <space> = Not tested, or letters indicating level of performance (clause 6.2).

Port	Frequency range [MHz]	Applied Level [Vrms]	Injection Method	Required Criteria	Complied Criteria	Result
AC Power Port	0.15 – 230	3	CDN-M3	A	A	PASS

CONCLUSION

No operation errors were detected during or after the applied test(s)

IMMUNITY – DIPS AND INTERRUPTIONS

TEST DESCRIPTION

Method
EN 61000-4-11 (1994) + A1 (2001)
Electromagnetic compatibility (EMC) -- Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests.

Set-up
Only the general laboratory conditions apply. No special requirements are defined for the configuration of the EuT. The AC power input of the EuT is connected to the power simulator system that generates the dips and interruptions.

Procedure
The dips and interruptions were applied at different phase angles, 0°, 90° and 270°. The duration of each dip and interruption is specified below. EuT was given at least 10 seconds periods to recover between each test. The number of tests applied at each phase angle is specified below.

Instruments used during measurement
Instrument lists are found in the Annex for each test session.

Comments
No recorded comments.

Severity		**Conformity**	
Port:	AC Input Port	Verdict:	Pass
Intervals	20sec	Test engineer:	Jørn Gustavsen
Repetitions:	3		

DETAILED TEST LOG

Note: The choice of test levels could differ from the procedure, based on the nature of EuT.
Note: An asterisk (*) indicates tests not within the scope of accreditation.
Note: Possible test case performances: <space> = Not tested, or letters indicating level of performance (clause 6.2).

Voltage Reduction	Voltage Level		Periods	Phase Angle [deg]	Required Criteria	Complied Criteria	Result
	Nominal	Test					
30% Dip	230	161	50	0	C	A	PASS
60% Dip	230	92	10	0	C	A	PASS
100% Interruption	230	0	0.5	0	C	A	PASS

CONCLUSION
No operation errors were detected during or after the applied test(s)

Annexes

UNCERTAINTY FIGURES

	Nemko Norway	Nemko Italy
Mains Port Disturbance Voltage	± 3.8 dB (9 kHz – 150 kHz) ± 3.5 dB (150 kHz – 30 MHz)	± 2.8 dB (9 kHz – 30 MHz)
Discontinuous Disturbance Voltage	± 4.3 dB (150 kHz – 30 MHz)	± 2.8 dB (150 kHz – 30 MHz)
Disturbance Power	± 3.4 dB (30 MHz – 300 MHz)	± 4.0 dB (30 MHz – 300 MHz)
Radiated Disturbance (3 meter)	± 4.8 dB (150 kHz – 30 MHz) ± 4.8 dB (30 MHz – 200 MHz) ± 4.4 dB (200 MHz – 1000 MHz)	± 5.2 dB (30 MHz – 200 MHz) ± 4.9 dB (200 MHz – 1000 MHz)
Radiated Disturbance (10 meter)	± 4.1 dB (30 MHz – 200 MHz) ± 4.2 dB (200 MHz – 1000 MHz)	± 5.0 dB (30 MHz – 200 MHz) ± 4.8 dB (200 MHz – 1000 MHz)
Harmonic Current Emissions	± 2.1mA	± 2%
Flicker	± 0.64 V (Dc and Dmax) ± 5 % (Pst and Plt)	± 2%
Electrostatic Discharges	The instruments specified are subject to periodic calibration. Monthly controls ensure, with 95% confidence level, that the instruments remain within the calibrated levels	
Radiated RF Field	The instruments specified are subject to periodic calibration. Monthly controls ensure, with 95% confidence level, that the instruments remain within the calibrated levels	
Electric Fast Transients	The instruments specified are subject to periodic calibration. Monthly controls ensure, with 95% confidence level, that the instruments remain within the calibrated levels	
Surge	The instruments specified are subject to periodic calibration. Monthly controls ensure, with 95% confidence level, that the instruments remain within the calibrated levels	
Conducted RF Disturbance	The instruments specified are subject to periodic calibration. Monthly controls ensure, with 95% confidence level, that the instruments remain within the calibrated levels	
Power Frequency Magnetic Field	The instruments specified are subject to periodic calibration. Monthly controls ensure, with 95% confidence level, that the instruments remain within the calibrated levels	
Dips/Interruptions	The instruments specified are subject to periodic calibration. Monthly controls ensure, with 95% confidence level, that the instruments remain within the calibrated levels	

MEASUREMENTS – OREDER NUMBER 94012

SCOPE OF WORK

The manufacturer introduces a new radiant heating element for this family design. At the same time the electronics has been adapted to the heater and is also included in this sample, in order to qualify it for this family.

Testing was performed on the E03700 model

Components qualified this time:

Component	Manufacturer	Model	Conformity
Electronic Power board	E.G.O	75.08010.600	Tested
Touch control PCB	E.G.O	75.13068.400	Tested
Induction generator for hob 1400W	E.G.O	75.08010.101	Tested
Induction generator for hob 2300W	E.G.O	75.08010.201	Tested

USED TEST EQUIPMENT

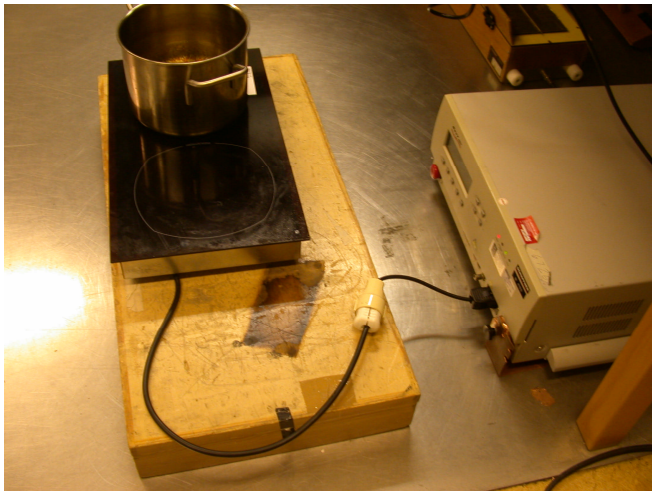
Equipment	Manufacturer	Model	Serial N°	Calibration
EMI Receiver	Rohde&Schwarz	ESHS30	N-3529	08/2007
LISN	Rohde&Schwarz	ESH2-Z5	N-3558	10/2007
Puls Limiter	Rohde&Schwarz	ESH3-Z2	N-3932	06/2008
Preamplifier: Amplifier	Amplifier Research	LN1000AM3	N-3884	-/-
EMI Receiver	Rohde&Schwarz	ESCI 3	N-4259	03/2009
Antenna	EMCO	3149	N-4227	04/2009
Antenna	EMCO	3143	N-3448	03/2009
EMI Receiver	Rohde&Schwarz	ESCS 30	N-3924	07/2009
EMI Receiver	Rohde&Schwarz	ESHS 10	N-3528	12/2008
Van Veen Antenna	Rohde&Schwarz	HM 020	N-3320	-/-
Click Analyzer	AFJ International	CL55C	N-4166	11/2007
LISN	AFJ International	LS16C	N-4166.01	06/2008
Clamp	Rohde&Schwarz	MDS21	N-4275	12/2007
EMI Receiver	Rohde&Schwarz	ESVS20	N-2886	07/2007
Power Analyzer	California Instruments	C15000iX-400-CTS	N-4082	03/2008
ESD Generator	Schaffner	NSG435	N-3355	03/2008
CS Test System	Schaffner	BestEMC	N-4103	05/2008
Amplifier	Amplifier Research	75A250	N-3883	-/-
Attenuator	Narda	FSCM99899769-6	N-4189	-/-
CDN	FCC	FCC-801-6-M3	N-3814	06/2008
Power Meter	Boonton	9200C	N-3718	10/2007
RF Generator	Rohde&Schwarz	SMG	N-2885	02/2009

PHOTOS

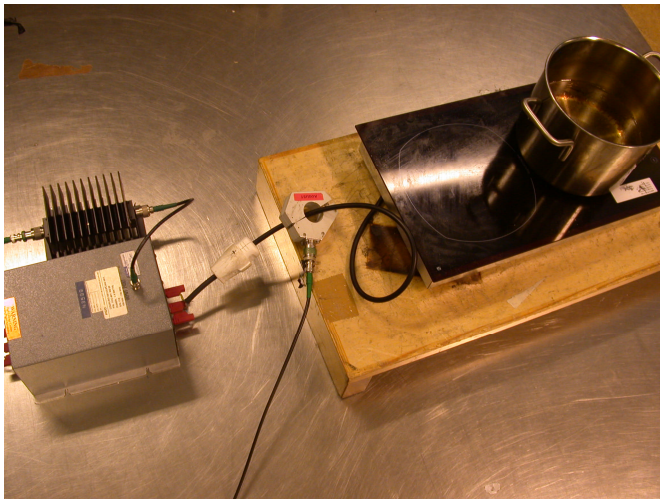
Notes: Mains Port Disturbance Voltage

Notes: Radiated Electromagnetic Field (3-Loop)

Notes: Radiated Disturbance (10 meter)



Notes: Electric Fast Transients, Surge and Dips/Interruptions

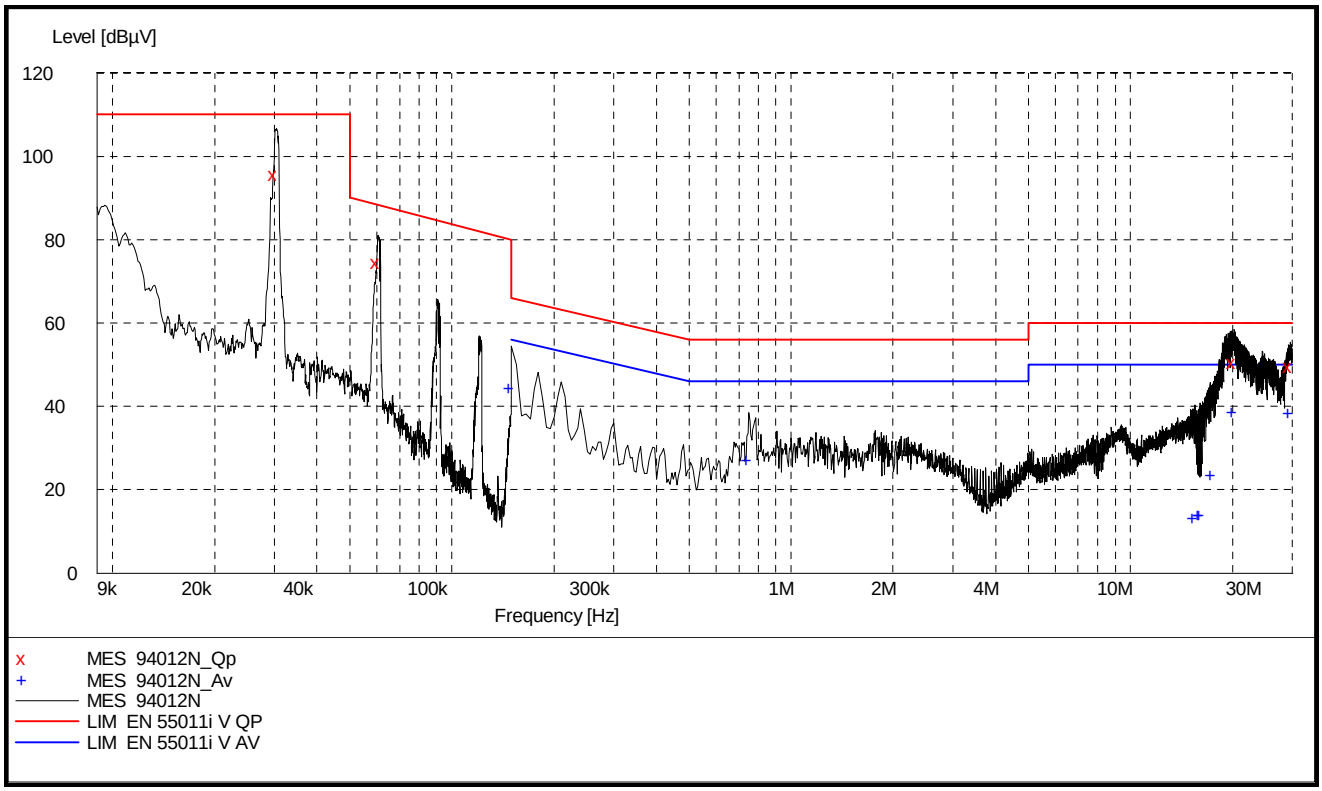


Notes: Conducted RF Disturbance

Notes: Model EO3700

MAINS DISTURBANCE VOLTAGE

1400W Induction zone



Note: This preview is a merged result of all peak detector measurements carried out on this product. This preview includes measurements on all lines, but shows only the worst level at each frequency. Any quasi-peak or average detector measurements are carried out at the "worst case" wire. ("x" = quasi-peak / "+" = average. Measurement data are presented below)

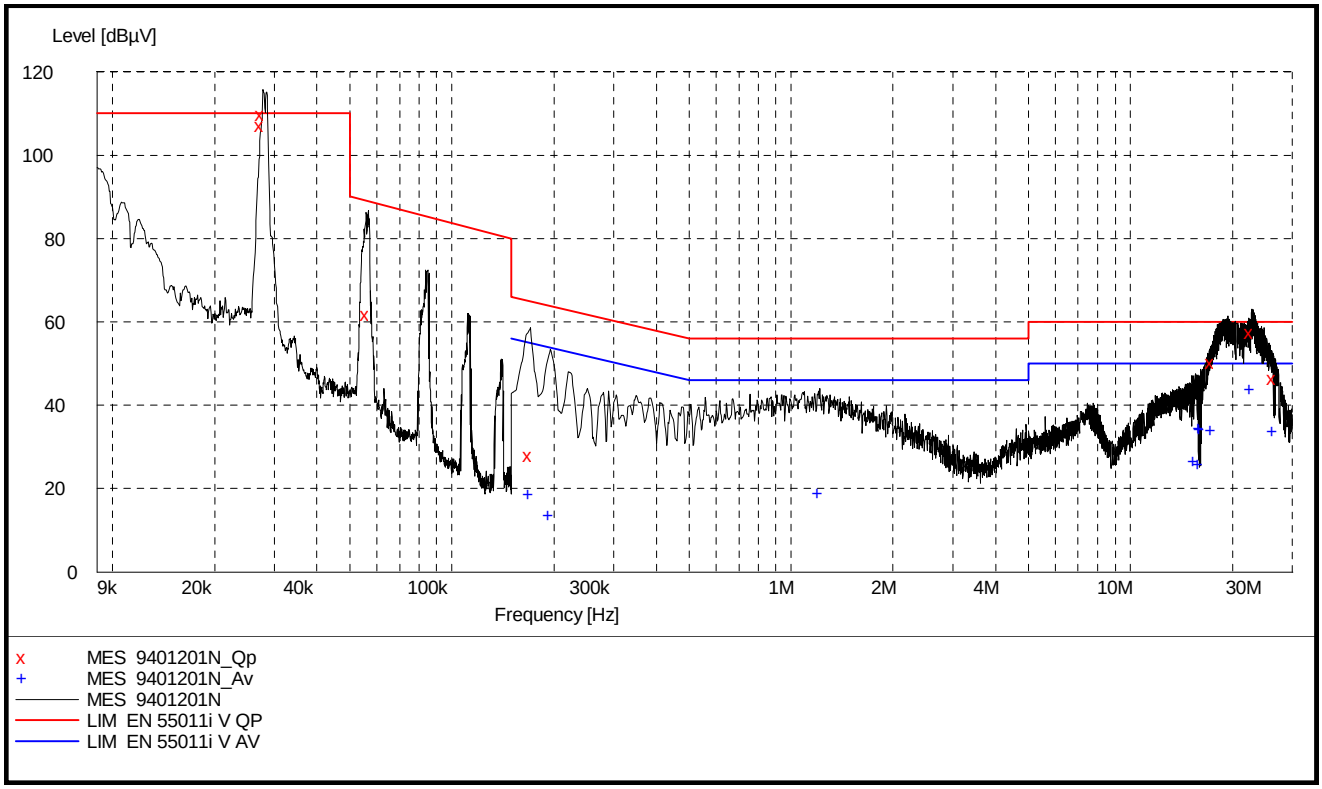
Quasi Peak Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.030400	95.70	10.70	110.00	-14.30	QP	N	Pass
0.060500	74.70	10.60	88.30	-13.60	QP	L1	Pass
20.240000	50.60	11.00	60.00	-9.40	QP	N	Pass
29.665000	49.70	11.10	60.00	-10.30	QP	N	Pass

Average Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.150000	44.50	10.10	56.00	-11.50	AV	L1	Pass
0.750000	27.10	10.20	46.00	-18.90	AV	N	Pass
15.465000	13.20	10.90	50.00	-36.80	AV	N	Pass
16.085000	13.90	10.90	50.00	-36.10	AV	N	Pass
16.170000	13.80	10.90	50.00	-36.20	AV	N	Pass
17.510000	23.40	10.90	50.00	-26.60	AV	N	Pass
20.240000	38.50	11.00	50.00	-11.50	AV	N	Pass
29.665000	38.20	11.10	50.00	-11.80	AV	N	Pass

2300W Induction zone



Note: This preview is a merged result of all peak detector measurements carried out on this product. This preview includes measurements on all lines, but shows only the worst level at each frequency. Any quasi-peak or average detector measurements are carried out at the "worst case" wire. ("x" = quasi-peak / "+" = average. Measurement data are presented below)

Quasi Peak Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.027700	107.10	10.70	110.00	-2.90	QP	L1	Pass
0.027800	109.70	10.70	110.00	-0.30	QP	L1	Pass
0.056700	61.80	10.60	88.90	-27.10	QP	N	Pass
0.170000	28.00	10.10	65.00	-37.00	QP	N	Pass
17.555000	50.20	10.90	60.00	-9.80	QP	N	Pass
22.785000	57.50	11.10	60.00	-2.50	QP	N	Pass
26.635000	46.40	11.20	60.00	-13.60	QP	L1	Pass

Average Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.170000	18.60	10.10	55.00	-36.40	AV	N	Pass
0.195000	13.70	10.10	53.80	-40.10	AV	N	Pass
1.215000	18.90	10.20	46.00	-27.10	AV	N	Pass
15.590000	26.50	10.90	50.00	-23.50	AV	N	Pass
16.045000	25.90	10.90	50.00	-24.10	AV	N	Pass
16.145000	34.50	10.90	50.00	-15.50	AV	L1	Pass
16.175000	34.10	10.90	50.00	-15.90	AV	L1	Pass
17.555000	34.00	10.90	50.00	-16.00	AV	N	Pass
22.785000	43.80	11.10	50.00	-6.20	AV	N	Pass
26.635000	33.80	11.20	50.00	-16.20	AV	L1	Pass

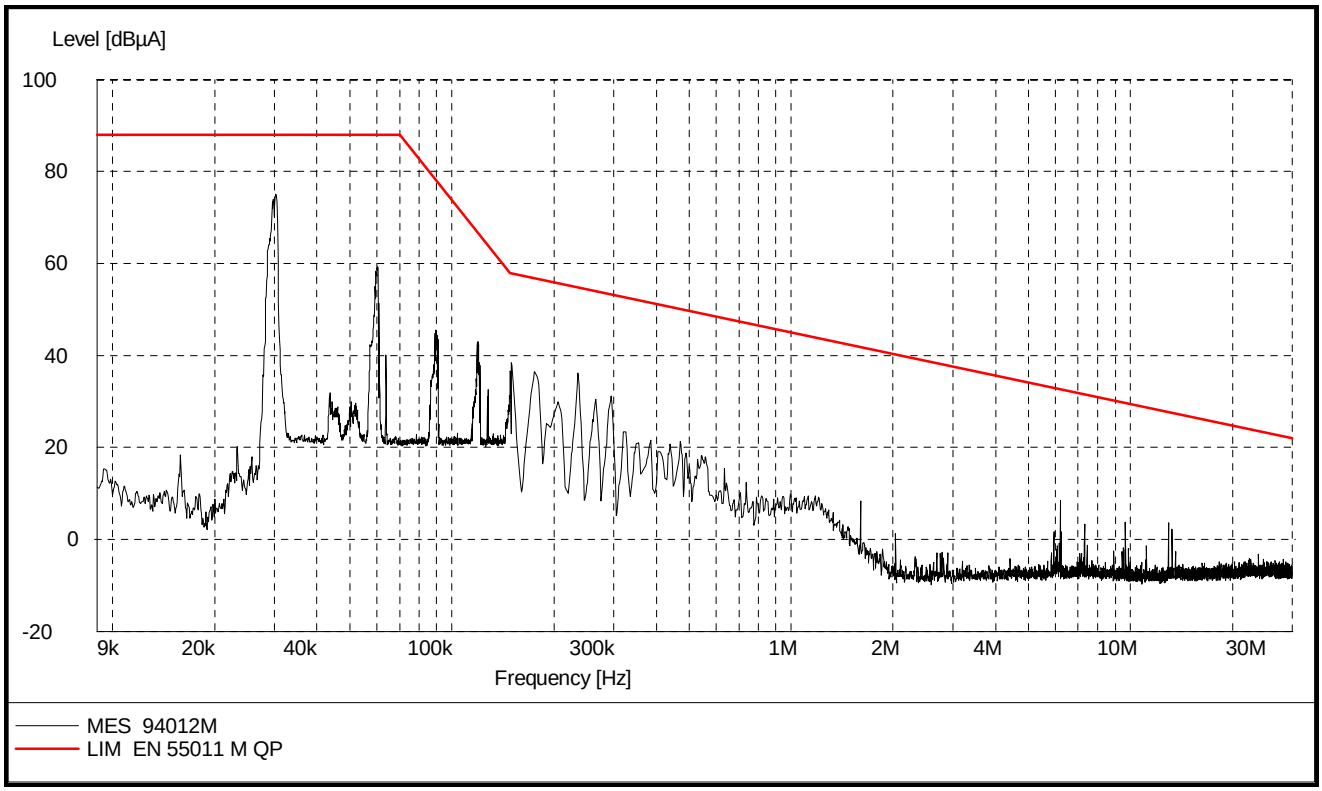
DISCONTINUOUS DISTURBANCE VOLTAGE

1400W Induction zone	Rx1 150KHz	Rx2 500KHz	Rx3 1.4MHz	Rx4 30MHz
OBSERVATION				
Short (T<10ms)	0	0		
Long (10ms<T<200ms)	0	0		
Fast Long (10ms<T<20ms)	0	0		
Total Clicks	0	0		
Continuous Events	0	0		
2 Click	0	0		
Continuous Time	0.0	0.0		
Limit [dBuV]	66	56		
CALCULATION				
Duration of Test	120min	120min	120min	120min
Click rate (N)	-	-	-	-
New Limit [dBuV]	-	-	-	-
Allowed Clicks	-	-	-	-
QUALIFICATION				
Short	-	-	-	-
Long	-	-	-	-
Total Clicks	-	-	-	-
Continuous Events	-	-	-	-
2 Click	-	-	-	-
Continuous Time	-	-	-	-
Verdict	Pass	Pass	Pass	Pass

2300W Induction zone	Rx1 150KHz	Rx2 500KHz	Rx3 1.4MHz	Rx4 30MHz
OBSERVATION				
Short (T<10ms)	0	0		
Long (10ms<T<200ms)	0	0		
Fast Long (10ms<T<20ms)	0	0		
Total Clicks	0	0		
Continuous Events	0	0		
2 Click	0	0		
Continuous Time	0.0	0.0		
Limit [dBuV]	66	56		
CALCULATION				
Duration of Test	120min	120min	120min	120min
Click rate (N)	-	-	-	-
New Limit [dBuV]	-	-	-	-
Allowed Clicks	-	-	-	-
QUALIFICATION				
Short	-	-	-	-
Long	-	-	-	-
Total Clicks	-	-	-	-
Continuous Events	-	-	-	-
2 Click	-	-	-	-
Continuous Time	-	-	-	-
Verdict	Pass	Pass	Pass	Pass

RADIATED ELECTROMAGNETIC FIELD

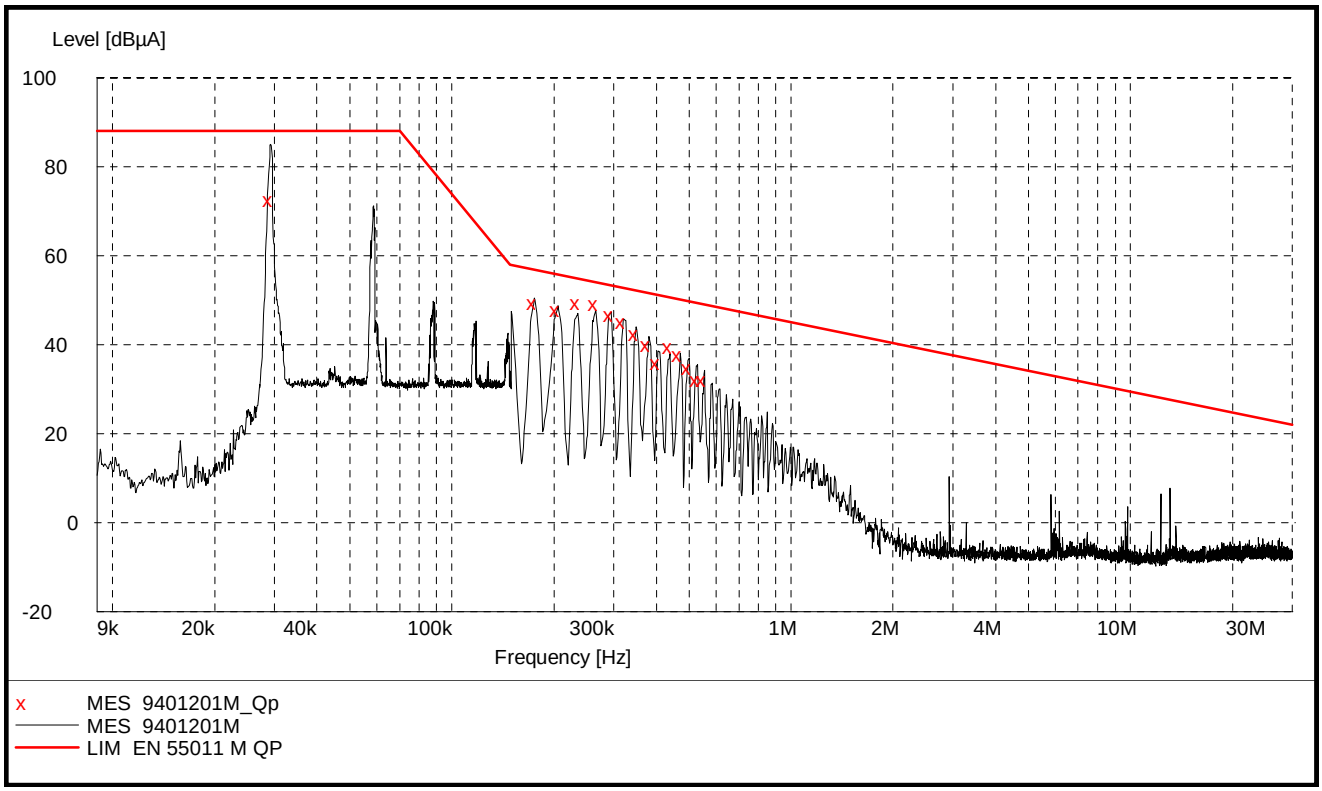
1400W Induction zone



Quasi Peak Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]

2300W Induction zone

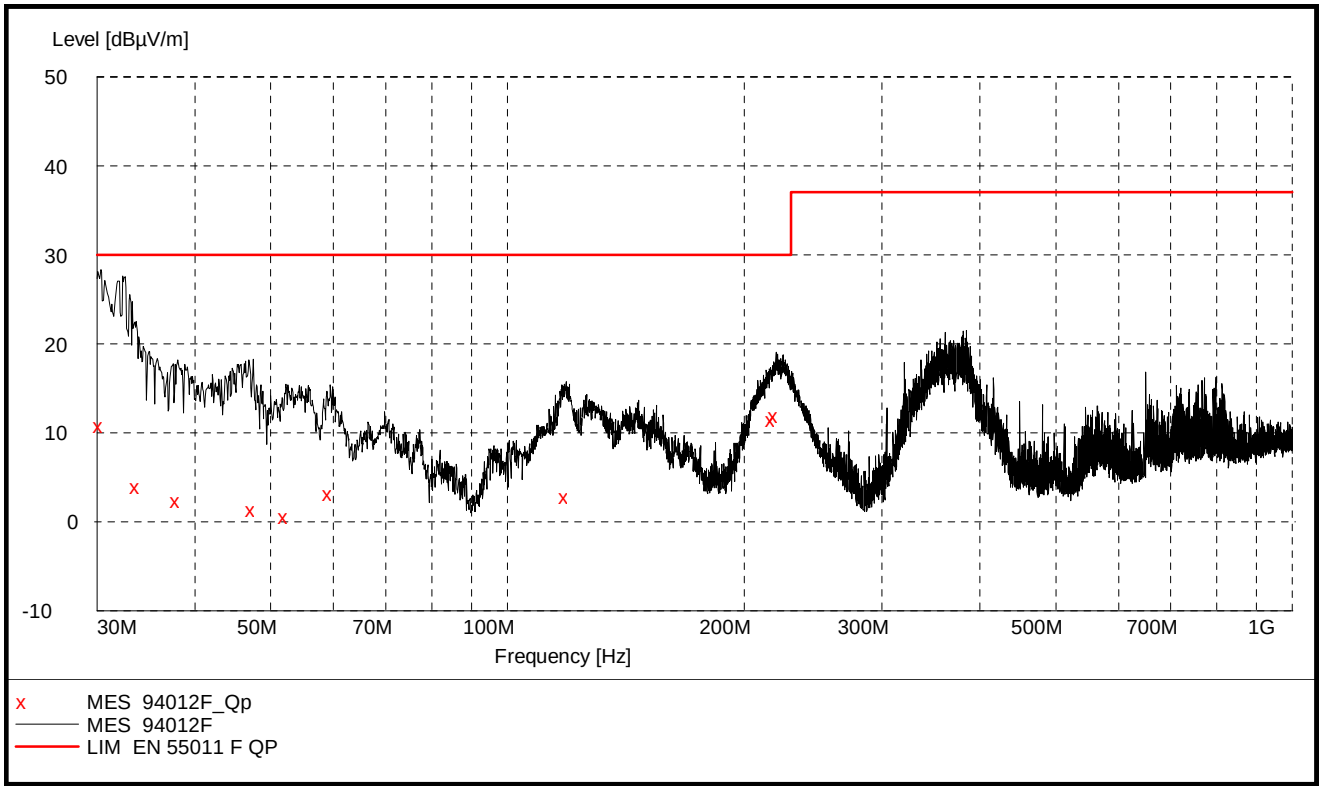


Quasi Peak Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.029300	72.60	-0.40	88.00	-15.40	QP	Y	Pass
0.175000	49.60	-0.30	56.20	-6.60	QP	Y	Pass
0.205000	47.80	-0.20	54.30	-6.50	QP	Y	Pass
0.235000	49.60	-0.20	52.70	-3.10	QP	Y	Pass
0.265000	49.20	-0.20	51.20	-2.00	QP	Y	Pass
0.295000	46.80	-0.20	49.90	-3.10	QP	Y	Pass
0.320000	45.20	-0.20	49.00	-3.80	QP	Y	Pass
0.350000	42.60	-0.20	47.90	-5.30	QP	Y	Pass
0.380000	39.80	-0.20	46.90	-7.10	QP	Y	Pass
0.405000	35.90	-0.20	46.20	-10.30	QP	Y	Pass
0.440000	39.50	-0.20	45.20	-5.70	QP	Y	Pass
0.470000	37.70	-0.20	44.40	-6.70	QP	Y	Pass
0.500000	34.80	-0.30	43.70	-8.90	QP	Y	Pass
0.530000	32.20	-0.30	43.00	-10.80	QP	Y	Pass
0.555000	32.20	-0.30	42.40	-10.20	QP	Y	Pass

RADIATED DISTURBANCE

1400W Induction zone



Note: This preview is a merged result of all peak detector measurements carried out on this product. This preview includes measurements on all orientations, but shows only the worst level at each frequency. Any quasi-peak or average detector measurements are carried out at the "worst case" orientation. ("x" = quasi-peak / "+" = average. Measurement data are presented below)

Frequency List

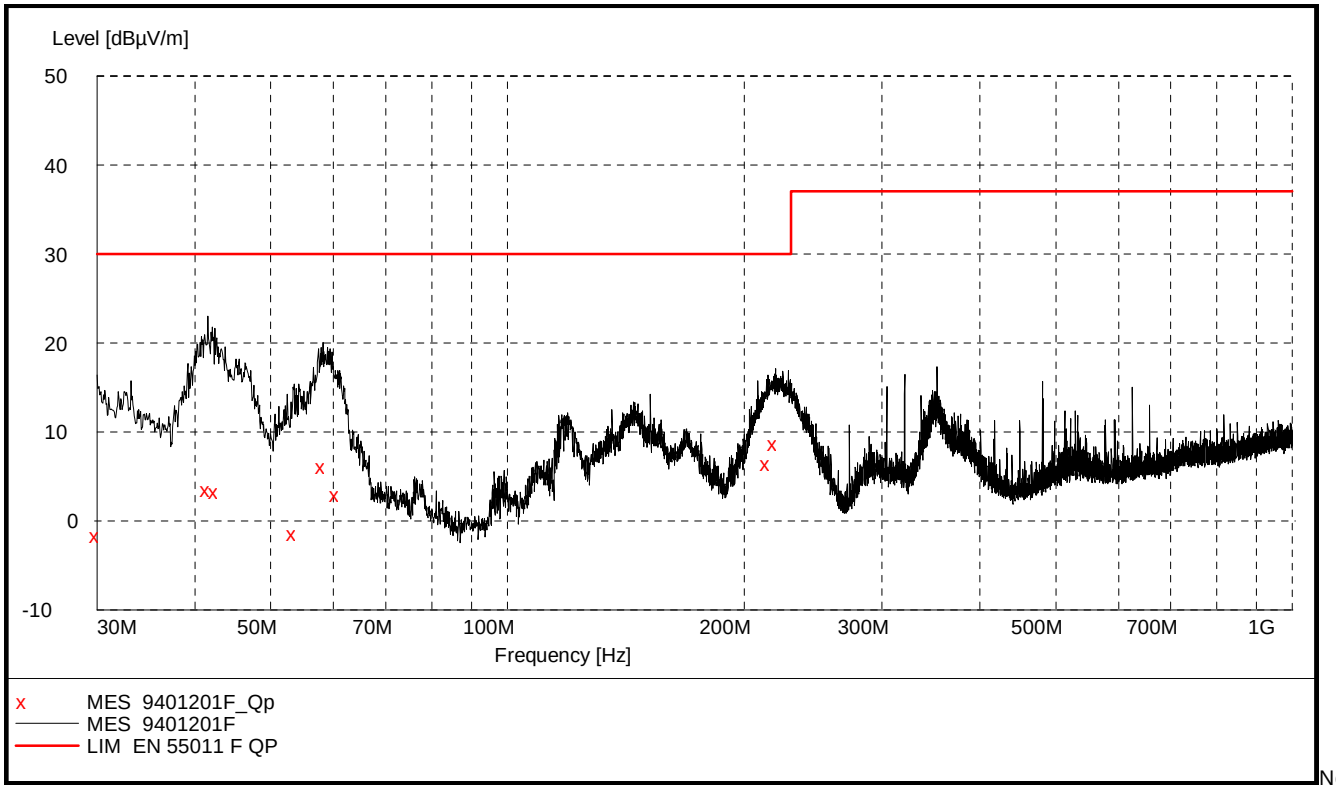
Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
30.320000	10.80	-29.5	30.0	19.2	QP	225.00	100.0
33.760000	4.00	-30.4	30.0	26.0	QP	315.00	100.0
38.080000	2.40	-31.3	30.0	27.6	QP	225.00	100.0
47.440000	1.40	-34.1	30.0	28.6	QP	270.00	100.0
52.160000	0.50	-35.0	30.0	29.5	QP	0.00	100.0
59.520000	3.20	-35.4	30.0	26.8	QP	270.00	100.0
118.800000	2.80	-34.3	30.0	27.2	QP	0.00	100.0
218.400000	11.40	-30.3	30.0	18.6	QP	0.00	100.0
220.080000	12.00	-30.3	30.0	18.0	QP	180.00	100.0

Quasi Peak Detector Data

Final result

Receiver				Compliance		Turntable	Antenna		
Frequency [MHz]	Reading [dBuV/m]	CF [dB]	Level [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Azm. [deg]	Hgt. [cm]	Pol.	Result
30.320	-1.08	12.39	11.31	30.00	-18.69	199	152	HOR	Pass
30.320	13.15	12.39	25.54	30.00	-4.46	170	112	VER	Pass
220.080	5.60	10.18	15.78	30.00	-14.22	2	320	HOR	Pass
220.080	1.24	10.18	11.42	30.00	-18.58	4	106	VER	Pass

2300W Induction zone



Note : This preview is a merged result of all peak detector measurements carried out on this product. This preview includes measurements on all orientations, but shows only the worst level at each frequency. Any quasi-peak or average detector measurements are carried out at the "worst case" orientation. ("x" = quasi-peak / "+" = average. Measurement data are presented below)

Frequency List

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
30.000000	-1.70	-29.4	30.0	31.7	QP	180.00	100.0
41.520000	3.50	-32.2	30.0	26.5	QP	180.00	100.0
42.640000	3.30	-32.6	30.0	26.7	QP	90.00	100.0
53.520000	-1.40	-35.1	30.0	31.4	QP	135.00	100.0
58.240000	6.10	-35.3	30.0	23.9	QP	135.00	100.0
60.800000	3.00	-35.3	30.0	27.0	QP	135.00	100.0
214.800000	6.40	-30.5	30.0	23.6	QP	180.00	100.0
219.440000	8.70	-30.3	30.0	21.3	QP	180.00	100.0

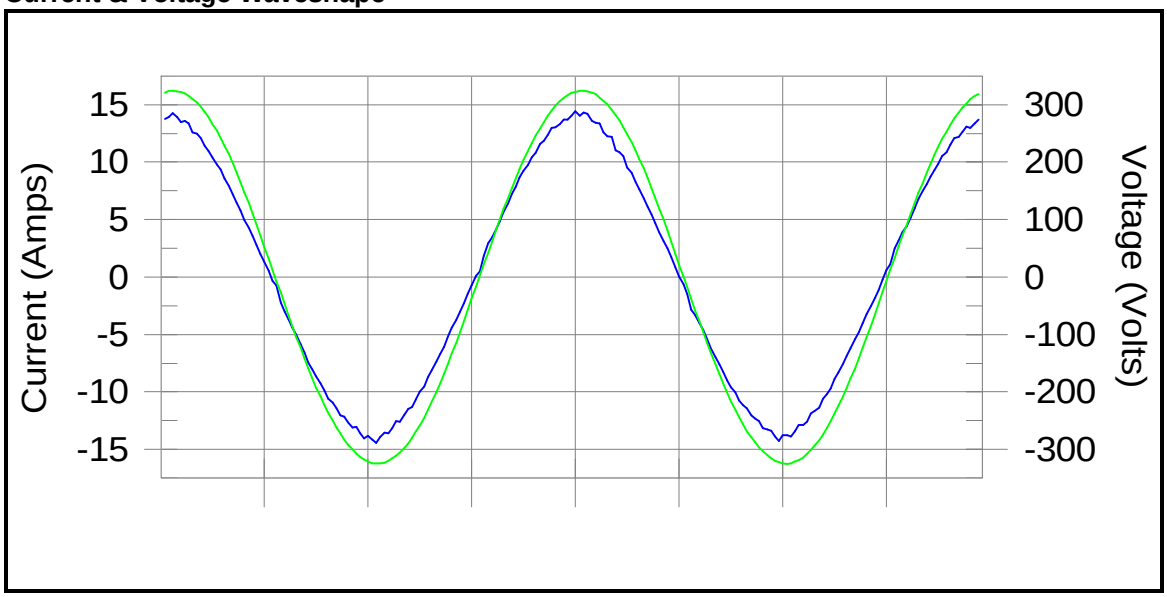
Quasi Peak Detector Data

Final result

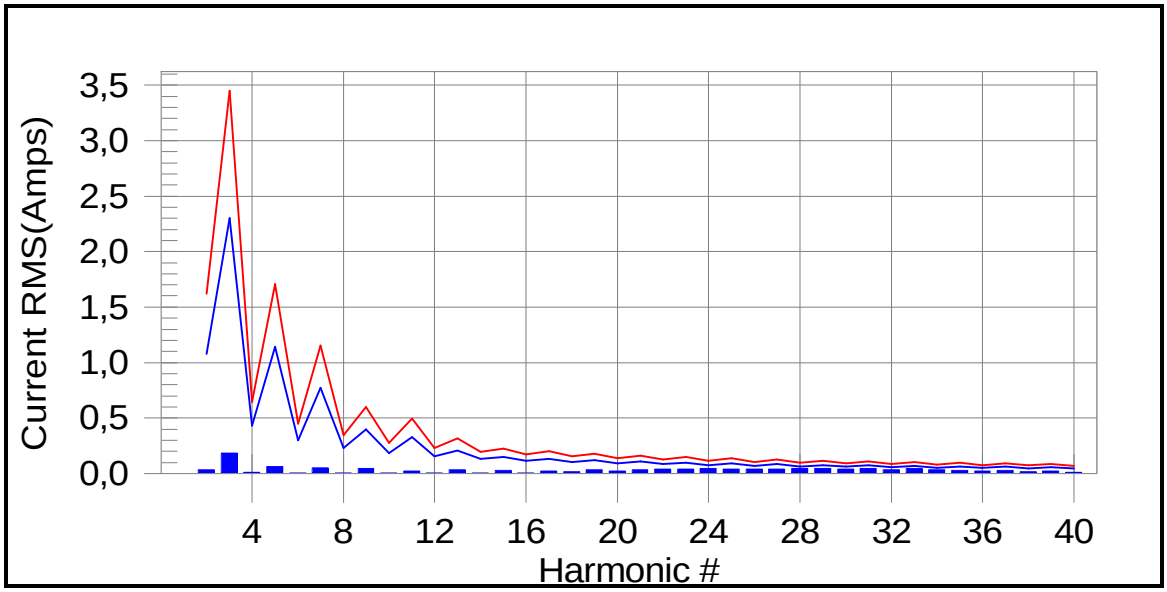
Receiver				Compliance		Turntable	Antenna		
Frequency [MHz]	Reading [dBuV/m]	CF [dB]	Level [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Azm. [deg]	Hgt. [cm]	Pol.	Result
41.520	1.78	8.56	10.34	30.00	-19.66	17	333	HOR	Pass
41.520	8.77	8.56	17.33	30.00	-12.67	67	310	VER	Pass
58.240	3.19	4.48	7.67	30.00	-22.33	80	122	HOR	Pass
58.240	11.47	4.48	15.95	30.00	-14.05	162	184	VER	Pass
219.440	3.67	10.13	13.80	30.00	-16.20	157	294	HOR	Pass
219.440	-0.77	10.13	9.36	30.00	-20.64	33	144	VER	Pass

HARMONIC DISTORTION

Current & Voltage Waveshape



Harmonic Contents – Graphic Presentation



Harmonic Contents – Numeric Presentation

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0,030	1,080	2,8	0,037	1,620	2,29	Pass
3	0,163	2,300	7,1	0,183	3,450	5,29	Pass
4	0,008	0,430	1,9	0,011	0,645	1,70	Pass
5	0,059	1,140	5,2	0,063	1,710	3,68	Pass
6	0,005	0,300	1,8	0,007	0,450	1,60	Pass
7	0,026	0,770	3,4	0,051	1,155	4,43	Pass
8	0,004	0,230	1,7	0,005	0,345	1,57	Pass
9	0,041	0,400	10,2	0,045	0,600	7,45	Pass
10	0,004	0,184	2,1	0,005	0,276	1,85	Pass
11	0,012	0,330	3,6	0,020	0,495	4,08	Pass
12	0,003	0,153	1,9	0,004	0,230	1,71	Pass
13	0,031	0,210	14,8	0,034	0,315	10,91	Pass
14	0,003	0,131	2,1	0,004	0,197	2,17	Pass
15	0,022	0,150	14,3	0,027	0,225	12,01	Pass
16	0,003	0,115	2,6	0,008	0,173	4,80	Pass
17	0,018	0,132	13,5	0,023	0,199	11,58	Pass
18	0,004	0,102	3,9	0,016	0,153	10,33	Pass
19	0,024	0,118	20,5	0,032	0,178	17,76	Pass
20	0,006	0,092	6,0	0,026	0,138	18,80	Pass
21	0,016	0,107	14,6	0,032	0,161	19,85	Pass
22	0,009	0,084	10,5	0,039	0,125	31,53	Pass
23	0,023	0,098	23,7	0,041	0,147	28,18	Pass
24	0,013	0,077	17,4	0,048	0,115	41,36	Pass
25	0,021	0,090	23,5	0,042	0,135	30,92	Pass
26	0,019	0,071	26,6	0,041	0,106	38,46	Pass
27	0,028	0,083	34,1	0,042	0,125	33,93	Pass
28	0,024	0,066	36,1	0,043	0,099	43,15	Pass
29	0,032	0,078	41,4	0,043	0,116	37,39	Pass
30	0,026	0,061	43,2	0,042	0,092	45,12	Pass
31	0,036	0,073	49,6	0,049	0,109	44,52	Pass
32	0,024	0,058	41,4	0,036	0,086	41,83	Pass
33	0,032	0,068	47,2	0,045	0,102	43,93	Pass
34	0,018	0,054	32,6	0,035	0,081	42,65	Pass
35	0,023	0,064	35,1	0,030	0,096	31,67	Pass
36	0,011	0,051	22,5	0,020	0,077	26,04	Pass
37	0,023	0,061	37,1	0,027	0,091	29,50	Pass
38	0,010	0,048	19,7	0,015	0,073	20,88	Pass
39	0,017	0,058	29,4	0,021	0,087	23,99	Pass
40	0,006	0,046	12,0	0,013	0,069	18,32	Pass

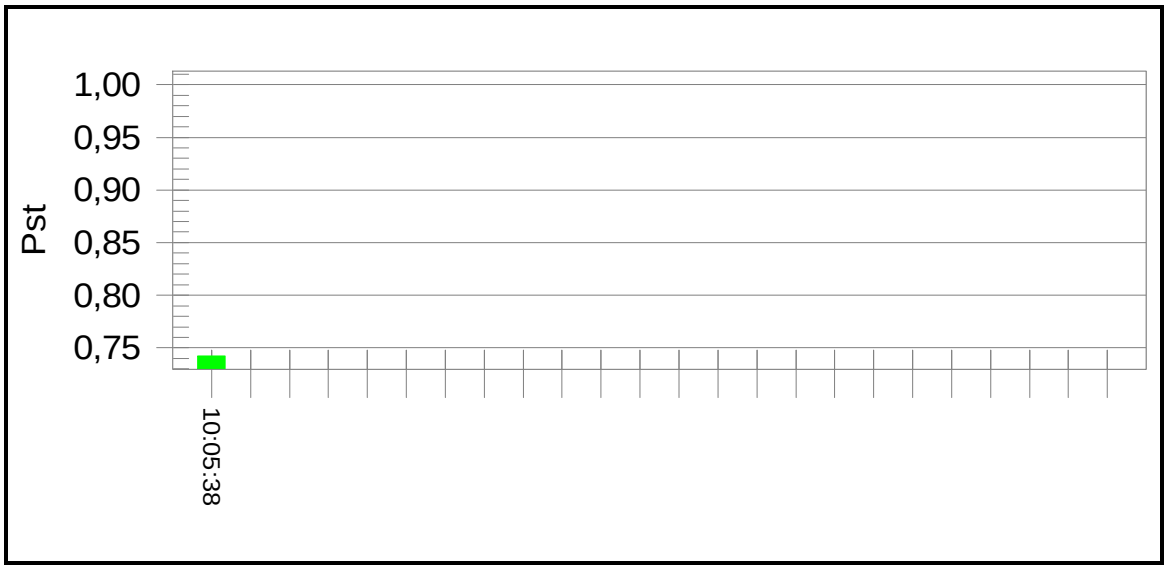
VOLTAGE FLUCTUATIONS

Numeric Presentation

1400W Induction zone

Parameter	Limit	Measured	Result
Dmax	4 %	-0.87 %	PASS
Dc	3.3 %	-0.81 %	PASS
Dt	500 msec	0.0 msec	PASS
Pst	1.0	0.743	PASS
Note:			

Flicker Probability – Pst

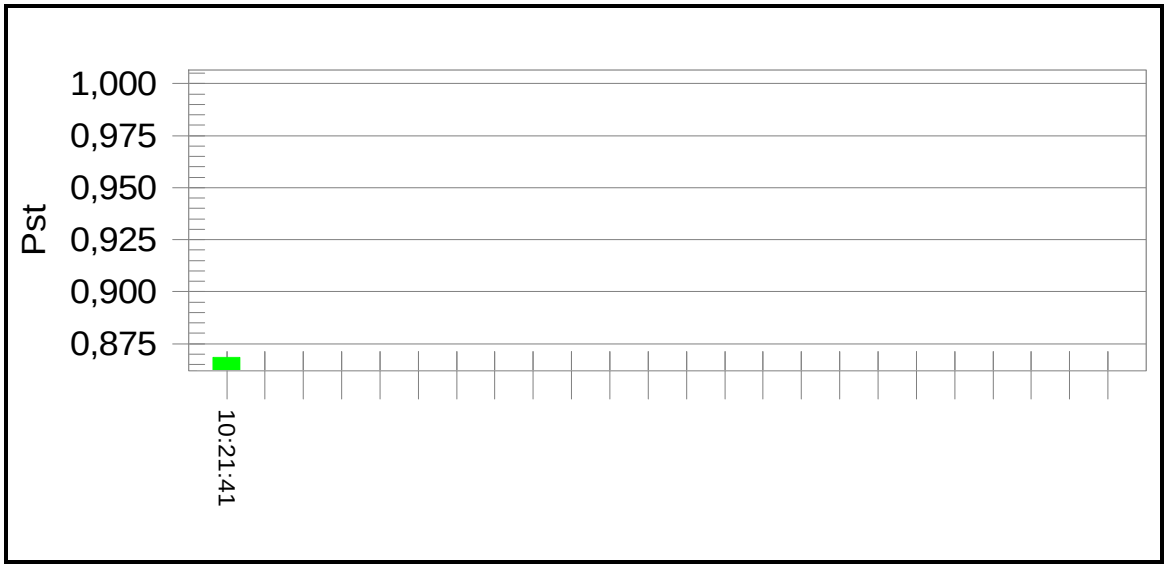


Numeric Presentation

2300W Induction zone

Parameter	Limit	Measured	Result
Dmax	4 %	-1.18 %	PASS
Dc	3.3 %	-0.91 %	PASS
Dt	500 msec	0.0 msec	PASS
Pst	1.0	0.869	PASS
Note:			

Flicker Probability – Pst



MEASUREMENTS – ORDER NUMBER 168231

SCOPE OF WORK

The manufacturer introduces new radiant heating elements for this family design. Also the control electronics and display comes in a new edition.

Testing was performed on the PI29 models XO3400 and XO3700

Components qualified this time

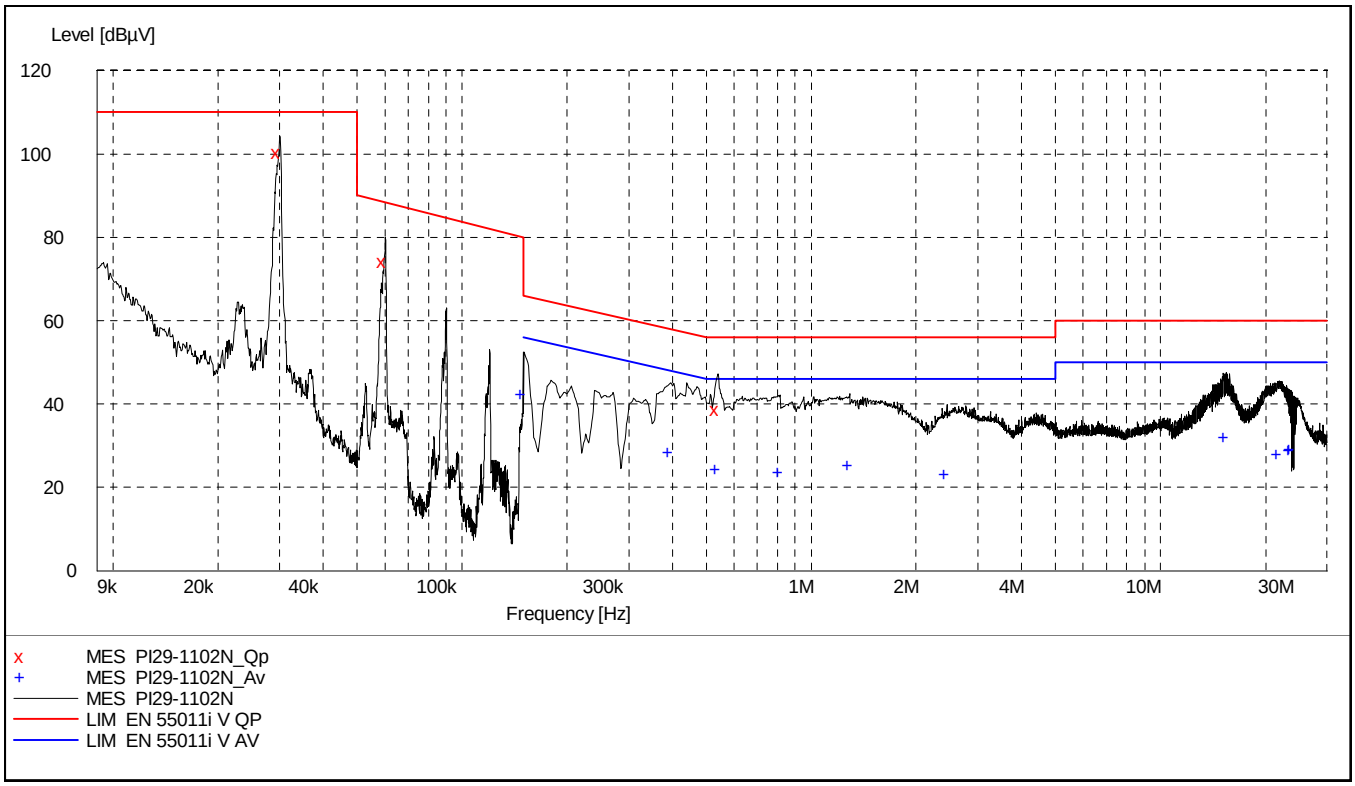
Component	Manufacturer	Model	Conformity
Induction generator module	EGO	75.08014.210	Tested
Induction generator module	EGO	75.08014.110	Tested
Interface control module Lisa (2f) Real BOOST	EGO	75.13105.002	Tested
Alt. Interface control module Lisa (2f) Soft BOOST	EGO	75.13105.102	Not tested

USED TEST EQUIPMENT

Equipment	Manufacturer	Model	Serial N°	Calibration
EMI Receiver	Rohde&Schwarz	ESHS30	N-3529	08/2011
LISN	Rohde&Schwarz	ESH2-Z5	N-3558	02/2013
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	N-3493	03/2012
Antenna Bilog	Sunol Sciences Inc	JB3	N-4525	09/2011
Preamplifier	Teseq	LNA 6900	LR 1593	11/2011
EMI Receiver	R&S	ESCI 3	N-4259	11/2011
Amplifier RF	Amplifier Research	75A250	N-3883	-/-
Amplifier RF	Amplifier Research	150W1000M3	N-4464	-/-
Van Veen Antenna	Rohde&Schwarz	HM 020	N-3320	-/-
Power Analyzer	California Instruments	C15000iX-400-CTS	N-4082	03/2012
ESD Generator	Schaffner	NSG435	N-3355	03/2012
CS Test System	Schaffner	BestEMC	N-4103	05/2011
Attenuator	Narda	FSCM99899769-6	N-4189	-/-
CDN	FCC	FCC-801-6-M3	N-3599	
Power Meter	Agilent Technologies	EPM E4419B	N-4459	10/2011
RF Generator	Rohde&Schwarz	SMY02	N-3936	04/2011

MAINS DISTURBANCE VOLTAGE

Induction zone 1 type 75.08014.110 with interface control module Lisa (2f) HB



Note: This preview is a merged result of all peak detector measurements carried out on this product. This preview includes measurements on all lines, but shows only the worst level at each frequency. Any quasi-peak or average detector measurements are carried out at the "worst case" wire. ("x" = quasi-peak / "+" = average. Measurement data are presented below)

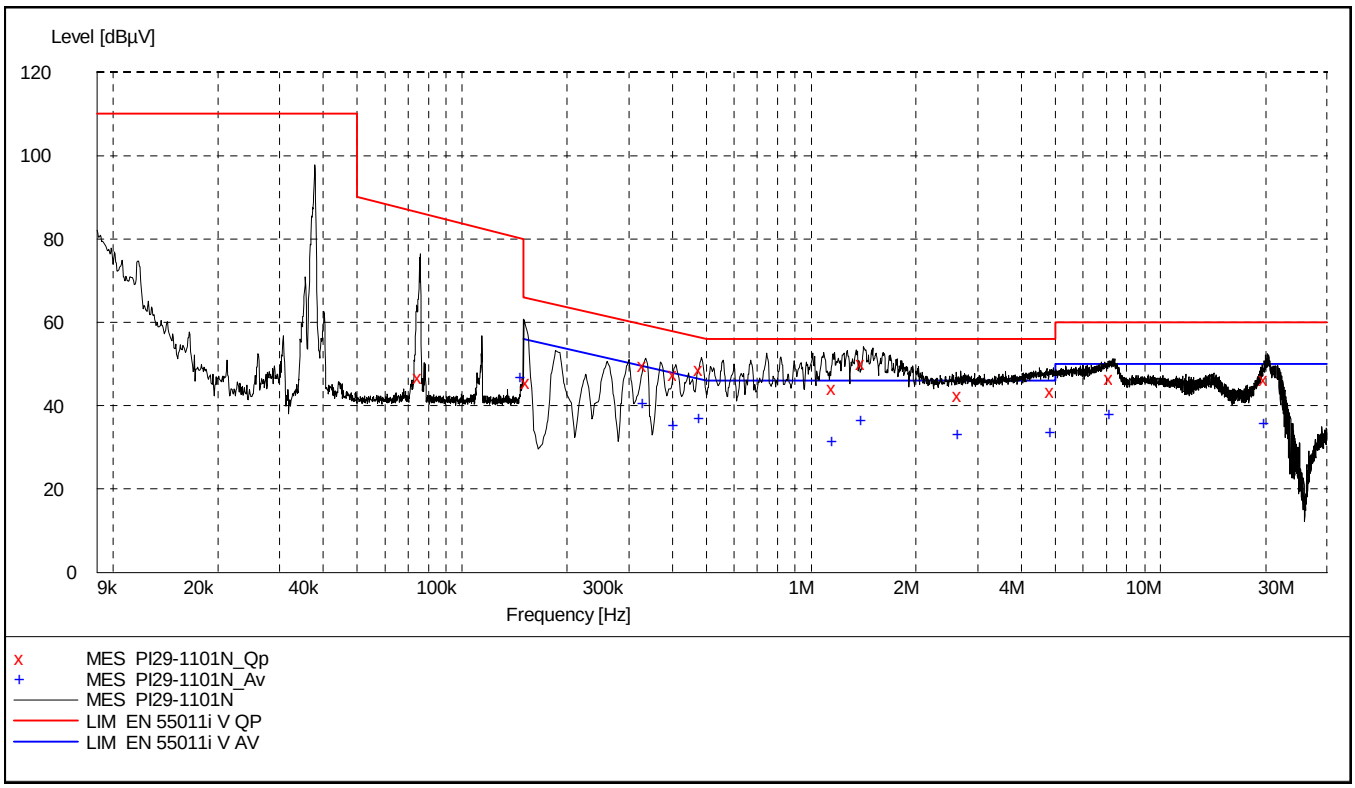
Quasi Peak Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.030000	100.40	10.20	110.00	-9.60	QP	N	Pass
0.060100	74.20	10.10	88.30	-14.10	QP	N	Pass
0.540000	38.70	10.20	56.00	-17.30	QP	N	Pass

Average Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.150000	42.40	10.10	56.00	-13.60	AV	N	Pass
0.395000	28.50	10.20	48.00	-19.50	AV	N	Pass
0.540000	24.30	10.20	46.00	-21.70	AV	N	Pass
0.815000	23.60	10.20	46.00	-22.40	AV	N	Pass
1.290000	25.10	10.20	46.00	-20.90	AV	L1	Pass
2.445000	23.10	10.30	46.00	-22.90	AV	N	Pass
15.400000	32.00	10.80	50.00	-18.00	AV	N	Pass
21.905000	28.00	11.30	50.00	-22.00	AV	N	Pass
23.710000	28.90	11.30	50.00	-21.10	AV	N	Pass
23.770000	29.20	11.30	50.00	-20.80	AV	N	Pass

Induction zone 2 type 75.08014.110 with interface control module Lisa (2f) HB



Note: This preview is a merged result of all peak detector measurements carried out on this product. This preview includes measurements on all lines, but shows only the worst level at each frequency. Any quasi-peak or average detector measurements are carried out at the "worst case" wire. ("x" = quasi-peak / "+" = average. Measurement data are presented below)

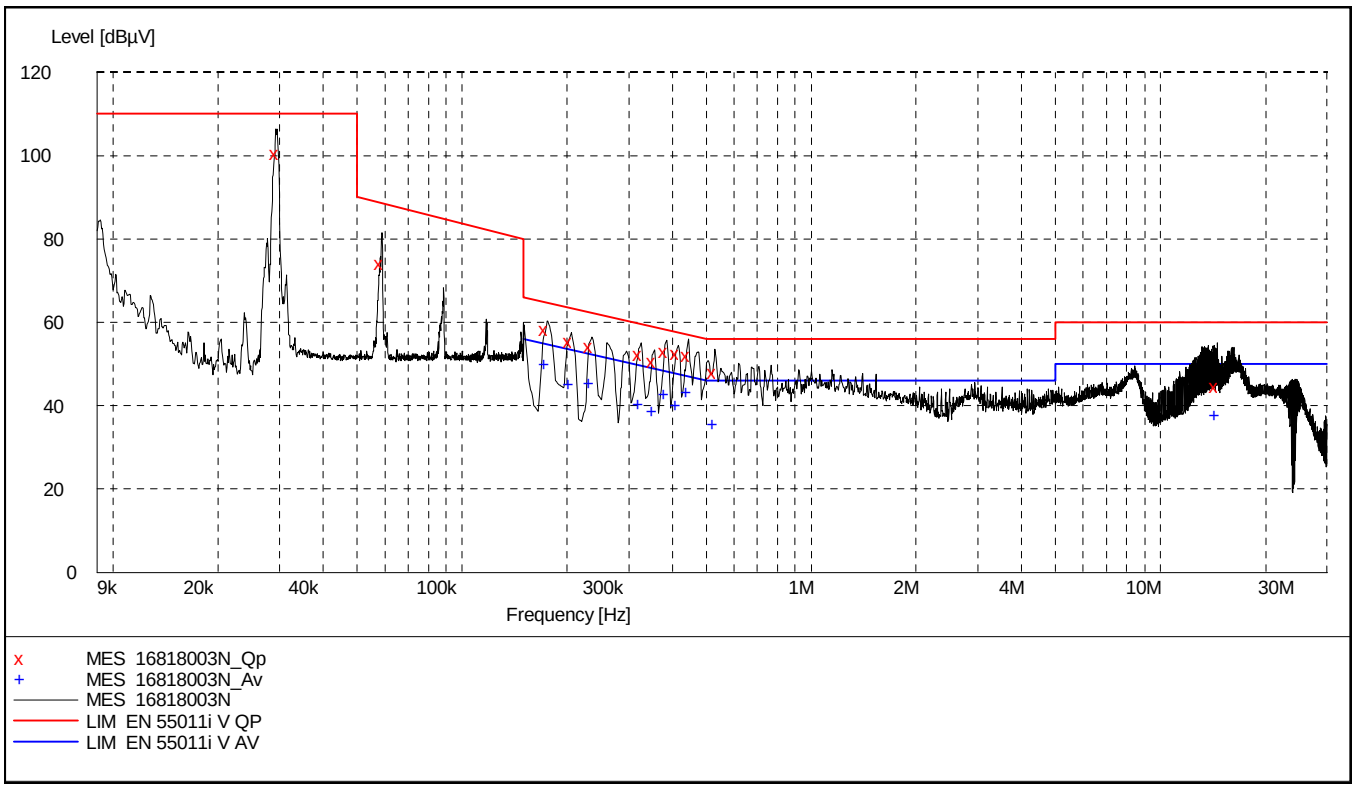
Quasi Peak Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.075900	46.70	10.10	86.20	-39.50	QP	N	Pass
0.155000	45.70	10.10	65.70	-20.00	QP	N	Pass
0.335000	49.60	10.20	59.30	-9.70	QP	L1	Pass
0.410000	47.70	10.20	57.60	-9.90	QP	L1	Pass
0.485000	48.80	10.20	56.30	-7.50	QP	L1	Pass
1.165000	44.10	10.20	56.00	-11.90	QP	N	Pass
1.415000	50.10	10.20	56.00	-5.90	QP	L1	Pass
2.675000	42.50	10.30	56.00	-13.50	QP	L1	Pass
4.925000	43.50	10.40	56.00	-12.50	QP	L1	Pass
7.285000	46.60	10.50	60.00	-13.40	QP	N	Pass
20.245000	46.50	11.30	60.00	-13.50	QP	N	Pass

Average Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.150000	46.80	10.10	56.00	-9.20	AV	N	Pass
0.335000	40.50	10.20	49.30	-8.80	AV	L1	Pass
0.410000	35.40	10.20	47.60	-12.20	AV	L1	Pass
0.485000	36.90	10.20	46.30	-9.40	AV	L1	Pass
1.165000	31.60	10.20	46.00	-14.40	AV	N	Pass
1.415000	36.40	10.20	46.00	-9.60	AV	L1	Pass
2.675000	33.10	10.30	46.00	-12.90	AV	L1	Pass
4.925000	33.50	10.40	46.00	-12.50	AV	L1	Pass
7.285000	38.00	10.50	50.00	-12.00	AV	N	Pass
20.245000	35.80	11.30	50.00	-14.20	AV	N	Pass

Induction zone 2 type 75.08014.210 with interface control module Slide (4f) HB



Note: This preview is a merged result of all peak detector measurements carried out on this product. This preview includes measurements on all lines, but shows only the worst level at each frequency. Any quasi-peak or average detector measurements are carried out at the "worst case" wire. ("x" = quasi-peak / "+" = average. Measurement data are presented below)

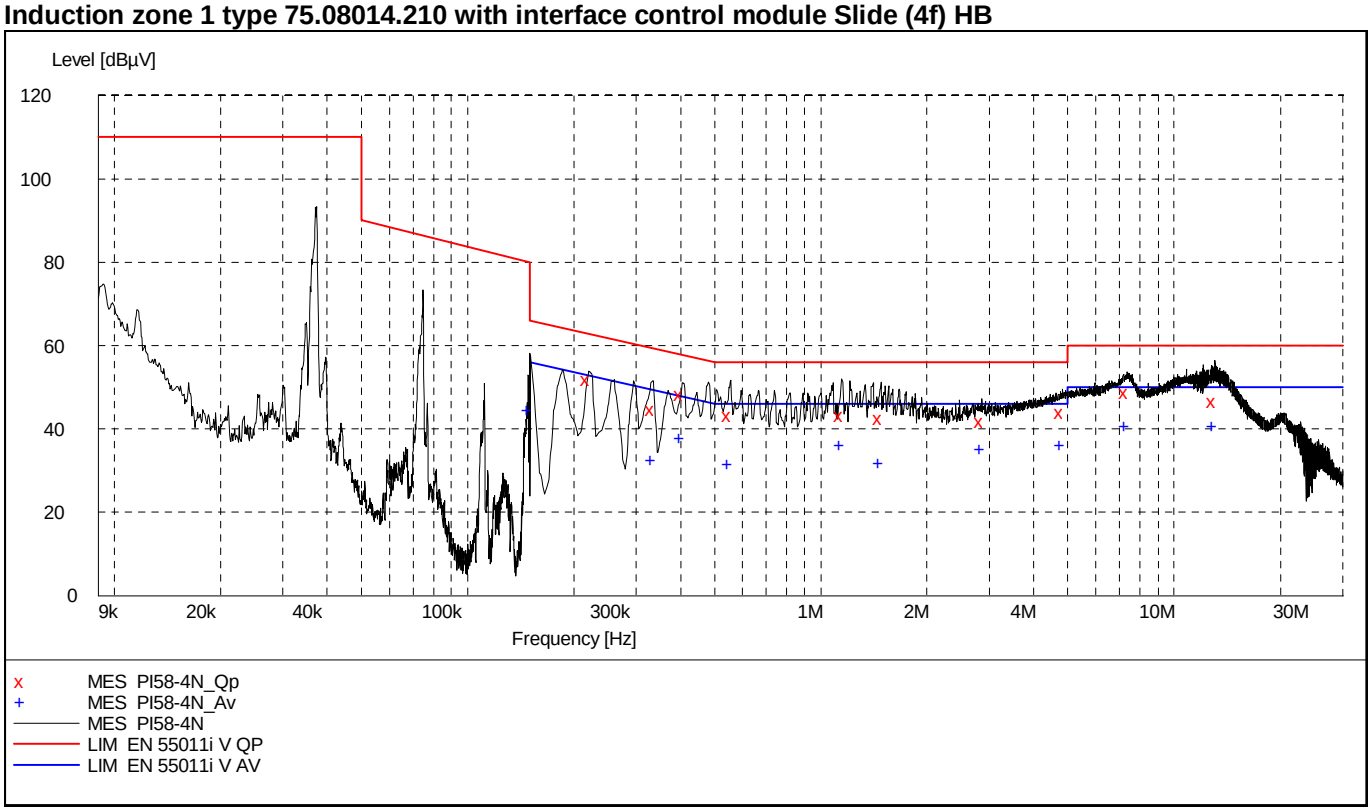
Quasi Peak Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.029600	100.70	10.20	110.00	-9.30	QP	N	Pass
0.059000	74.00	10.10	88.50	-14.50	QP	N	Pass
0.175000	58.40	10.10	64.70	-6.30	QP	N	Pass
0.205000	55.40	10.10	63.40	-8.00	QP	N	Pass
0.235000	54.20	10.10	62.30	-8.10	QP	N	Pass
0.325000	52.30	10.20	59.60	-7.30	QP	L1	Pass
0.355000	50.70	10.20	58.80	-8.10	QP	L1	Pass
0.385000	53.00	10.20	58.20	-5.20	QP	N	Pass
0.415000	52.50	10.20	57.50	-5.00	QP	N	Pass
0.445000	52.10	10.20	57.00	-4.90	QP	N	Pass
0.530000	47.90	10.20	56.00	-8.10	QP	N	Pass
14.555000	44.80	10.80	60.00	-15.20	QP	N	Pass

Average Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.175000	49.90	10.10	54.70	-4.80	AV	N	Pass
0.205000	45.20	10.10	53.40	-8.20	AV	N	Pass
0.235000	45.60	10.10	52.30	-6.70	AV	N	Pass
0.325000	40.20	10.20	49.60	-9.40	AV	L1	Pass
0.355000	38.50	10.20	48.80	-10.30	AV	L1	Pass
0.385000	42.70	10.20	48.20	-5.50	AV	N	Pass
0.415000	40.10	10.20	47.50	-7.40	AV	N	Pass
0.445000	43.20	10.20	47.00	-3.80	AV	N	Pass
0.530000	35.50	10.20	46.00	-10.50	AV	N	Pass
14.555000	37.60	10.80	50.00	-12.40	AV	N	Pass

Induction zone 1 type 75.08014.210 with interface control module Slide (4f) HB



Note: This preview is a merged result of all peak detector measurements carried out on this product. This preview includes measurements on all lines, but shows only the worst level at each frequency. Any quasi-peak or average detector measurements are carried out at the "worst case" wire. ("x" = quasi-peak / "+" = average. Measurement data are presented below)

Quasi Peak Detector Data

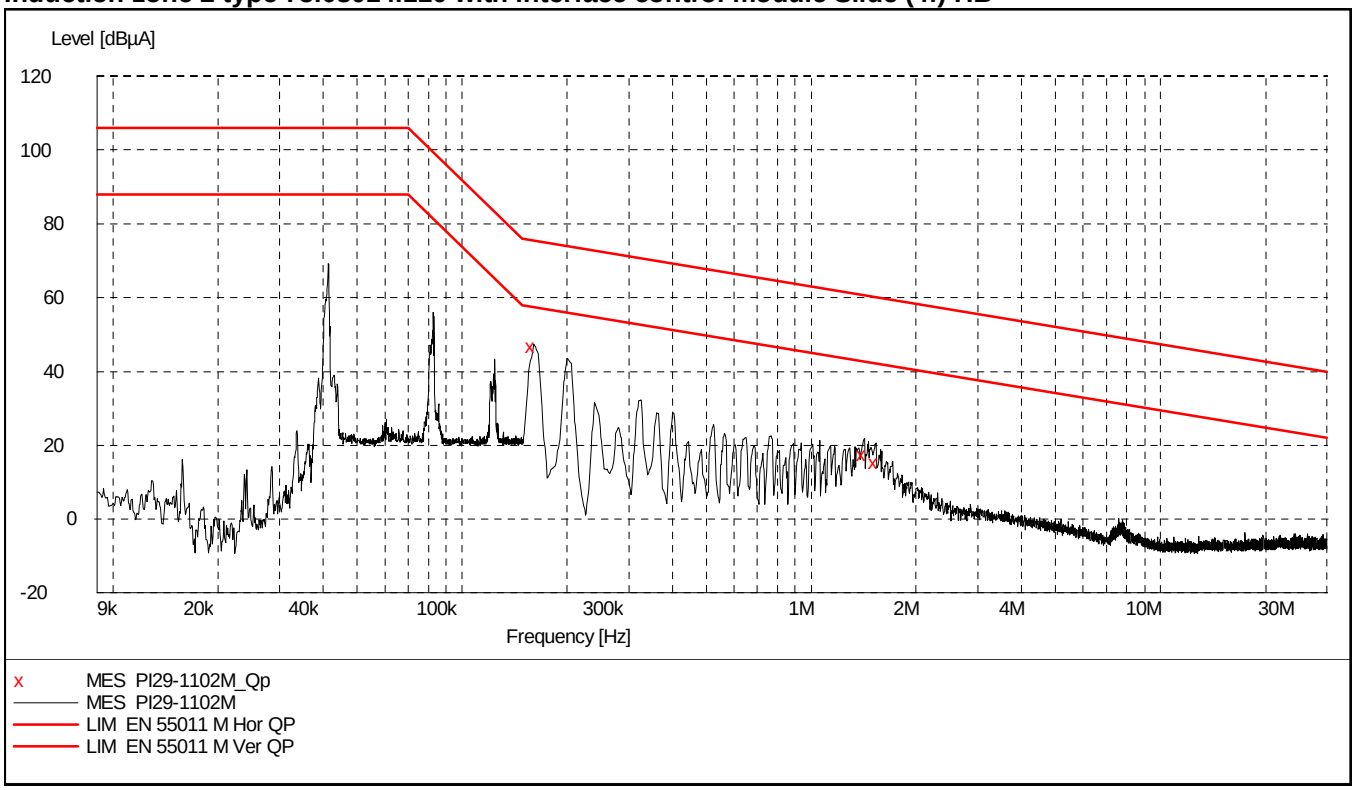
Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.220000	51.90	10.10	62.80	-10.90	QP	N	Pass
0.335000	44.80	10.20	59.30	-14.50	QP	N	Pass
0.405000	48.50	10.20	57.80	-9.30	QP	N	Pass
0.555000	43.40	10.20	56.00	-12.60	QP	N	Pass
1.145000	43.40	10.20	56.00	-12.60	QP	N	Pass
1.480000	42.50	10.20	56.00	-13.50	QP	N	Pass
2.860000	41.70	10.30	56.00	-14.30	QP	N	Pass
4.825000	44.10	10.40	56.00	-11.90	QP	N	Pass
7.350000	48.80	10.50	60.00	-11.20	QP	N	Pass
13.020000	46.80	10.70	60.00	-13.20	QP	L1	Pass

Average Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.150000	44.60	10.10	56.00	-11.40	AV	N	Pass
0.335000	32.40	10.20	49.30	-16.90	AV	N	Pass
0.405000	37.80	10.20	47.80	-10.00	AV	N	Pass
0.555000	31.60	10.20	46.00	-14.40	AV	N	Pass
1.145000	35.90	10.20	46.00	-10.10	AV	N	Pass
1.480000	31.70	10.20	46.00	-14.30	AV	N	Pass
2.860000	35.00	10.30	46.00	-11.00	AV	N	Pass
4.825000	35.90	10.40	46.00	-10.10	AV	N	Pass
7.350000	40.70	10.50	50.00	-9.30	AV	N	Pass
13.020000	40.50	10.70	50.00	-9.50	AV	L1	Pass

RADIATED ELECTROMAGNETIC FIELD

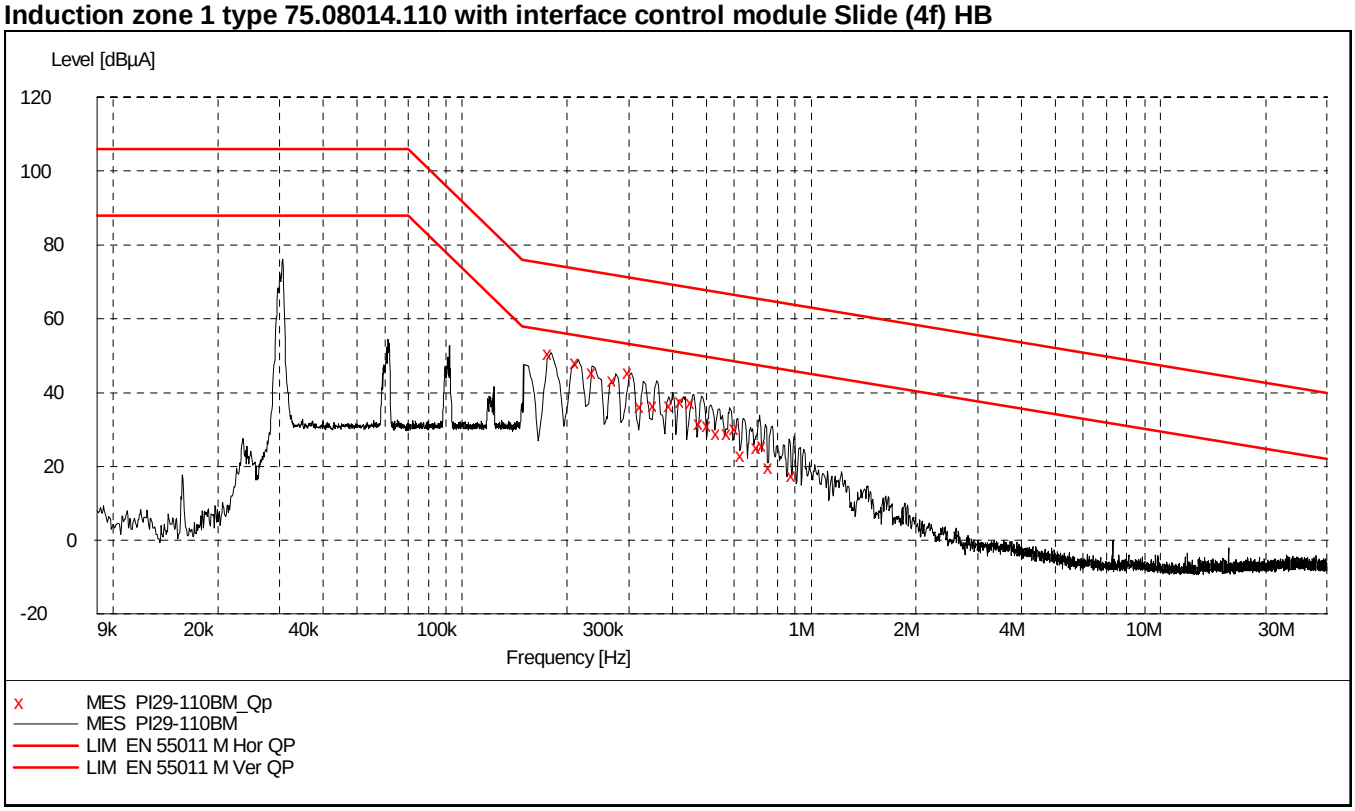
Induction zone 2 type 75.08014.110 with interface control module Slide (4f) HB



Quasi Peak Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.160000	46.80	-0.30	57.20	-10.40	QP	Y	Pass
1.420000	17.40	-0.80	31.20	-13.80	QP	Y	Pass
1.535000	15.30	-0.80	30.30	-15.00	QP	Y	Pass

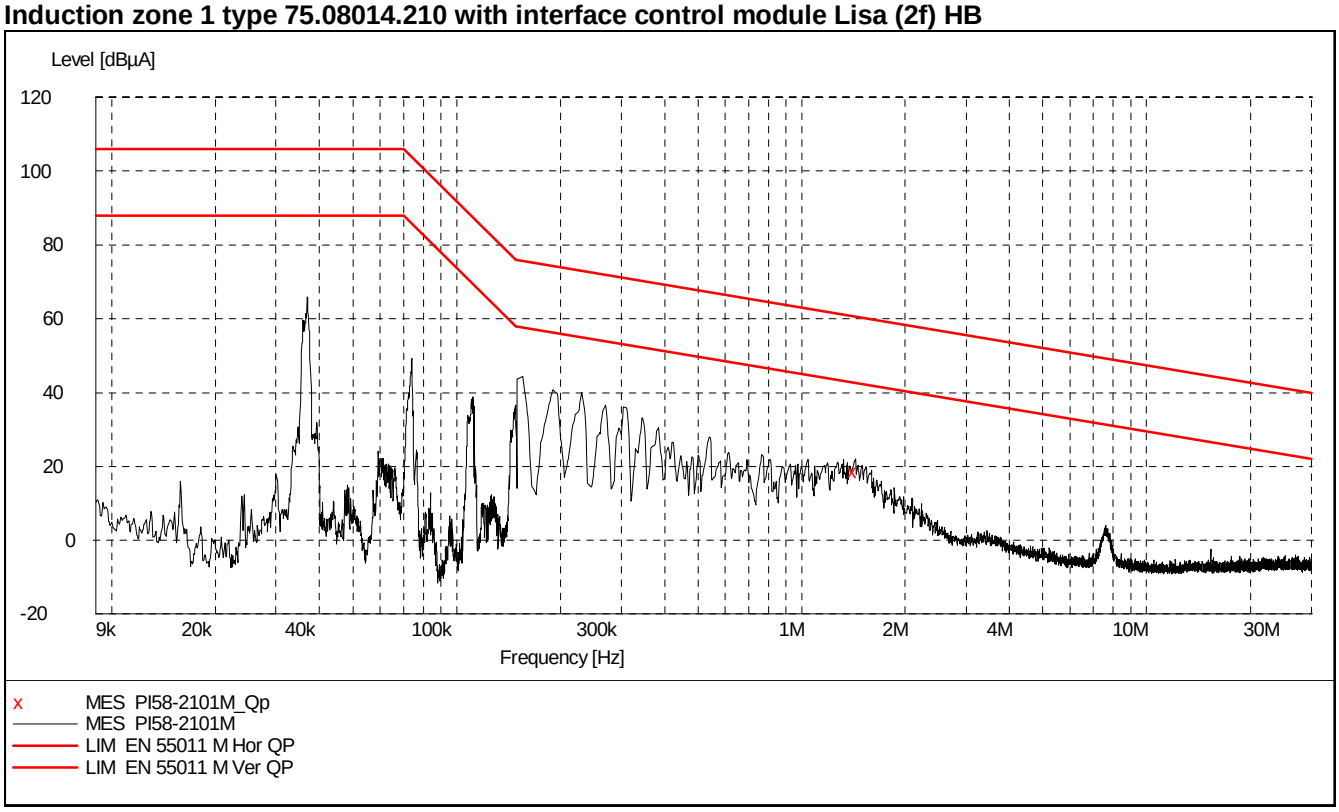
Induction zone 1 type 75.08014.110 with interface control module Slide (4f) HB



Quasi Peak Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.180000	50.70	-0.30	55.80	-5.10	QP	X	Pass
0.215000	48.10	-0.20	53.70	-5.60	QP	X	Pass
0.240000	45.50	-0.20	52.40	-6.90	QP	X	Pass
0.275000	43.30	-0.20	50.80	-7.50	QP	X	Pass
0.305000	45.50	-0.20	49.50	-4.00	QP	X	Pass
0.330000	36.20	-0.20	48.60	-12.40	QP	X	Pass
0.360000	36.70	-0.20	47.60	-10.90	QP	X	Pass
0.400000	36.40	-0.20	46.30	-9.90	QP	X	Pass
0.430000	37.70	-0.20	45.50	-7.80	QP	X	Pass
0.460000	37.30	-0.20	44.60	-7.30	QP	X	Pass
0.485000	31.60	-0.20	44.00	-12.40	QP	X	Pass
0.515000	31.10	-0.30	43.30	-12.20	QP	X	Pass
0.545000	28.80	-0.30	42.60	-13.80	QP	X	Pass
0.585000	29.00	-0.30	41.80	-12.80	QP	X	Pass
0.615000	30.20	-0.30	41.20	-11.00	QP	X	Pass
0.640000	22.90	-0.30	40.70	-17.80	QP	X	Pass
0.710000	25.00	-0.30	39.50	-14.50	QP	X	Pass
0.740000	25.50	-0.40	39.00	-13.50	QP	X	Pass
0.770000	19.70	-0.40	38.50	-18.80	QP	X	Pass
0.895000	17.60	-0.50	36.70	-19.10	QP	X	Pass

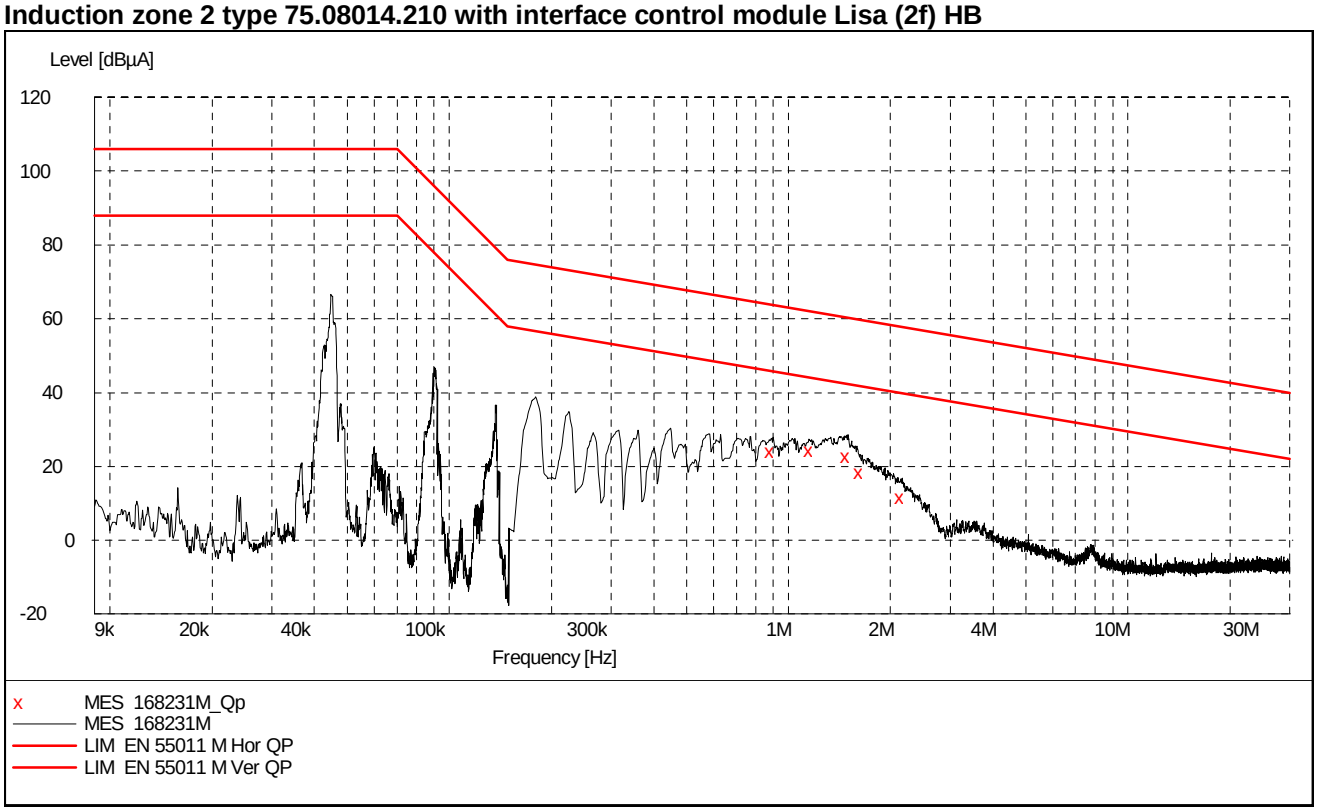
Induction zone 1 type 75.08014.210 with interface control module Lisa (2f) HB



Quasi Peak Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
1.430000	18.50	-0.80	31.10	-12.60	QP	Y	Pass

Induction zone 2 type 75.08014.210 with interface control module Lisa (2f) HB

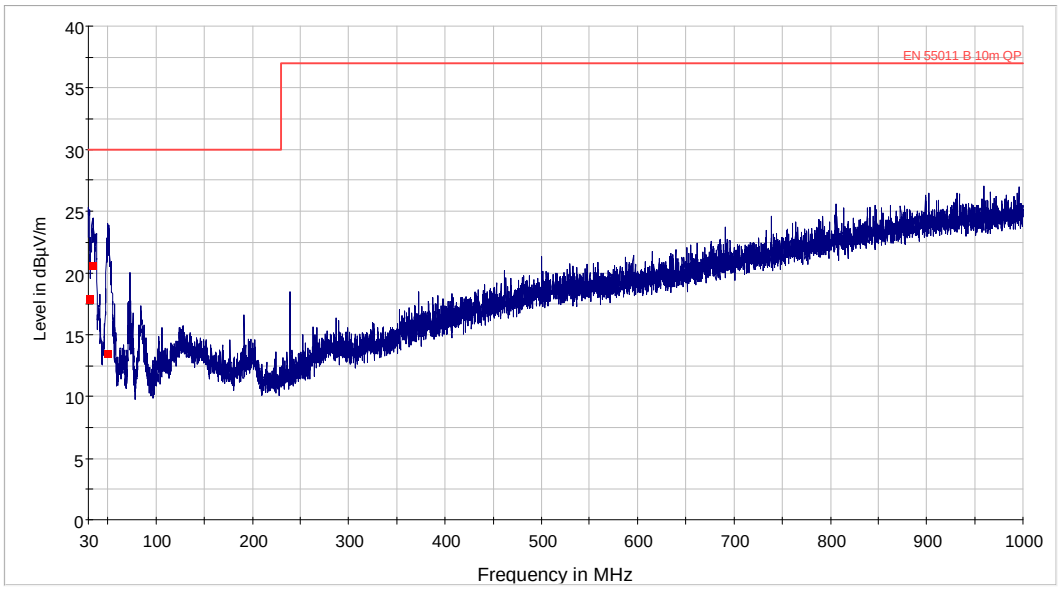


Quasi Peak Detector Data

Frequency [MHz]	Level [dBuV]	Af [dB]	Limit [dBuV]	Margin [dB]	Det	Position	Verdict [Pass/Fail]
0.900000	24.10	-0.50	36.70	-12.60	QP	Y	Pass
1.165000	24.30	-0.70	33.60	-9.30	QP	Y	Pass
1.495000	22.70	-0.80	30.60	-7.90	QP	Y	Pass
1.640000	18.40	-0.80	29.50	-11.10	QP	Y	Pass
2.160000	11.70	-0.70	26.20	-14.50	QP	Y	Pass

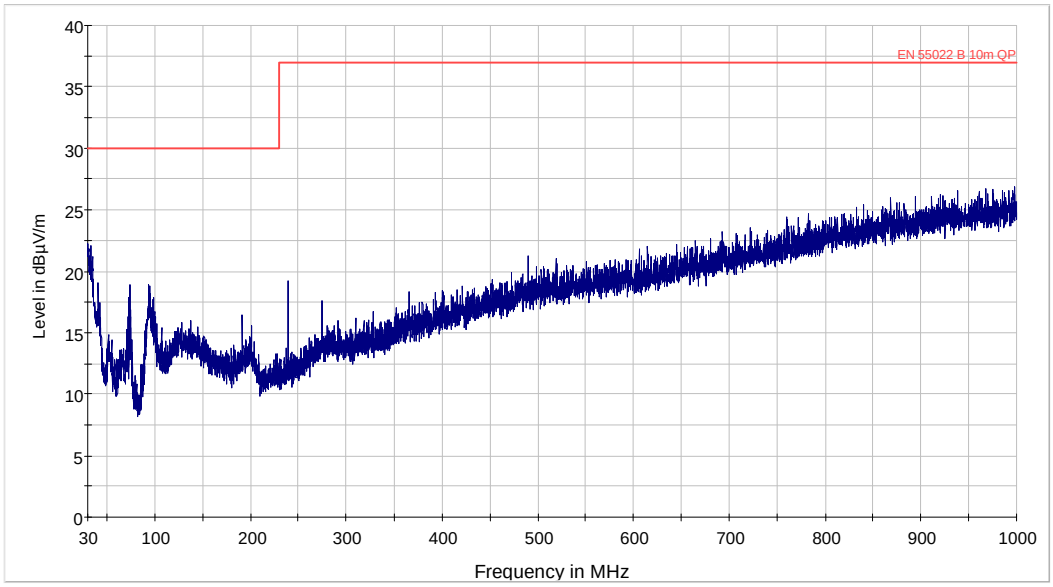
RADIATED DISTURBANCE

Induction zone 1 type 75.08014.110 with interface control module 75.13105.003

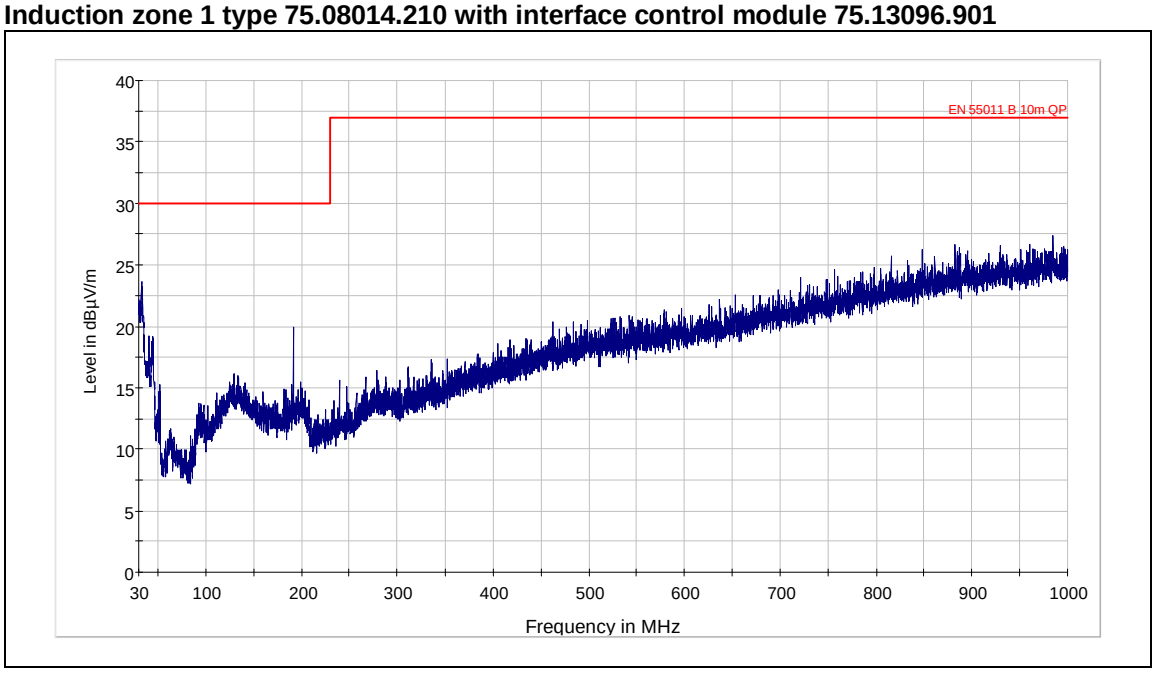


Note: This preview is a merged result of all peak detector measurements carried out on this product. This preview includes measurements for all pre-sets, but shows only the worst level at each frequency. Any quasi-peak detector measurements are carried out at the "worst case" position.

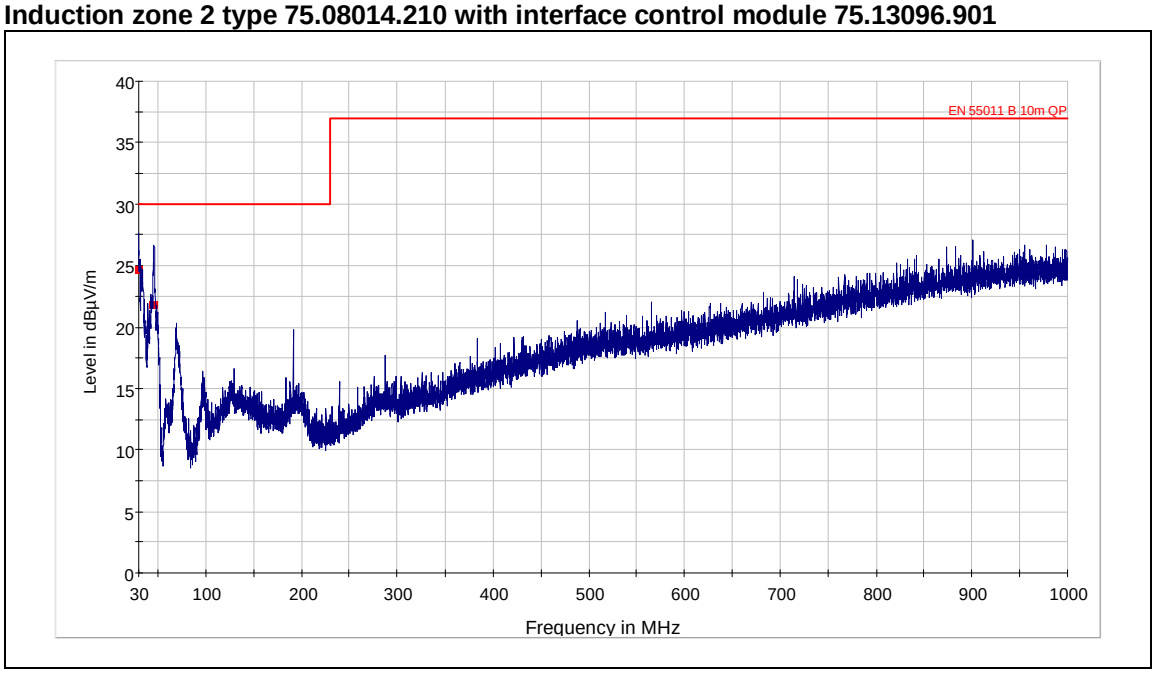
Quasi Peak Detector Data (Horizontal)



Induction zone 1 type 75.08014.210 with interface control module 75.13096.901



Induction zone 2 type 75.08014.210 with interface control module 75.13096.901



Note: This preview is a merged result of all peak detector measurements carried out on this product. This preview includes measurements for all pre-sets, but shows only the worst level at each frequency. Any quasi-peak detector measurements are carried out at the "worst case" position.

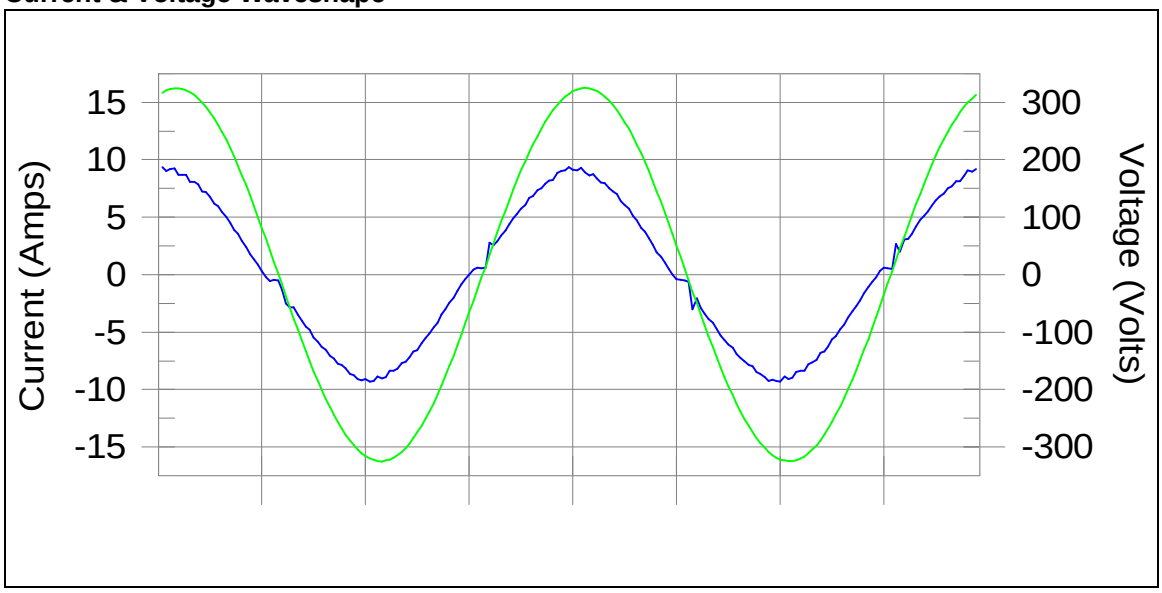
Quasi Peak Detector Data (Vertical)

Receiver		Compliance		Turntable	Antenna		
Frequency [MHz]	Level [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Azm. [deg]	Hgt. [cm]	Pol.	Result
30.007054	24.70	30.0	-5.30	0.0	100	V	Pass
45.895125	21.70	30.0	-8.30	344	100	V	Pass

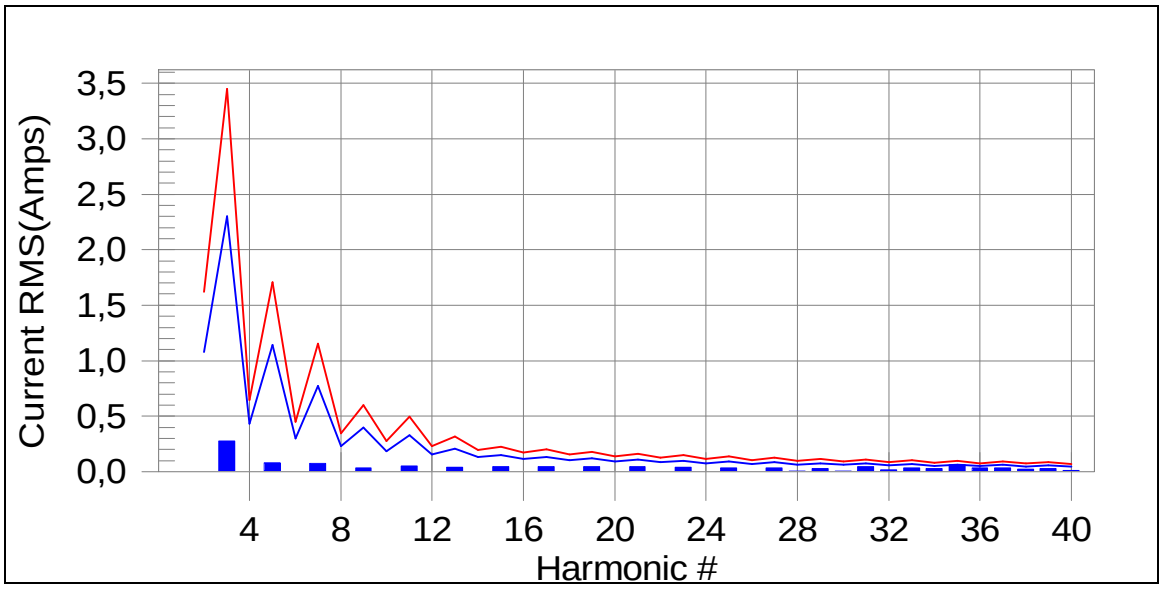
HARMONIC DISTORTION

Induction zone 1 type 75.08014.110 with interface control module Slide (4f) HB

Current & Voltage Waveshape



Harmonic Contents – Graphic Presentation

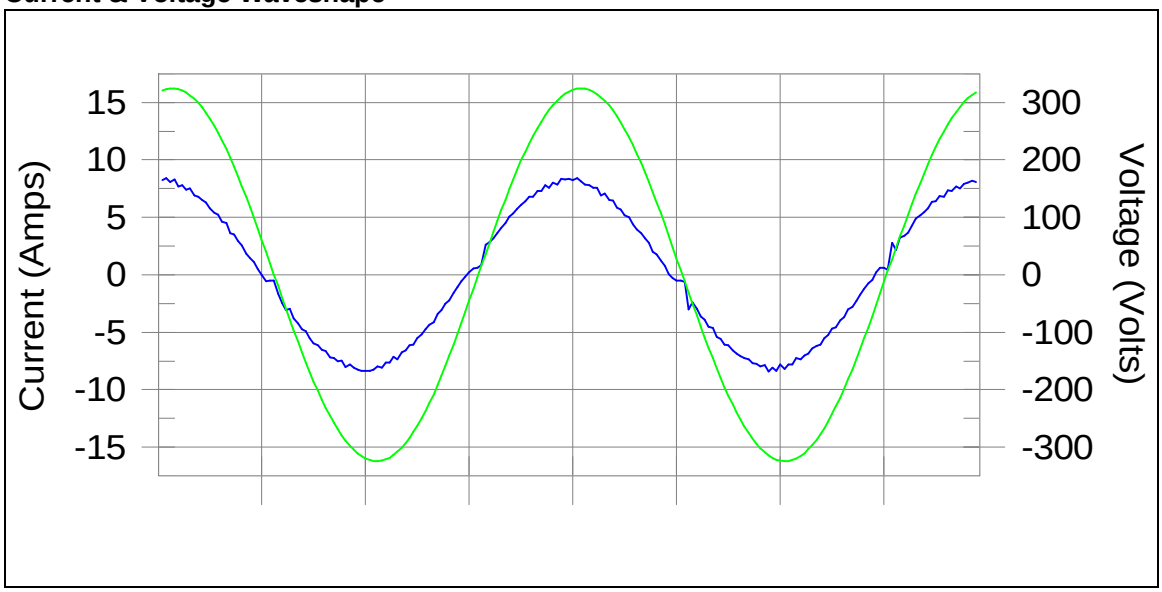


Numeric Presentation

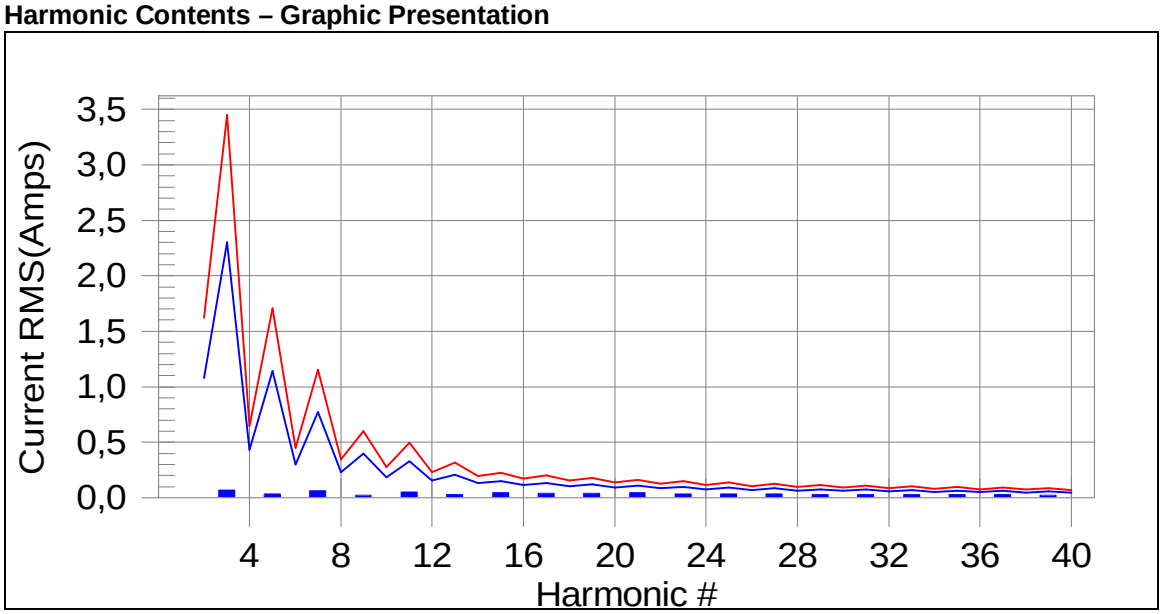
Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0,002	1,080	0,0	0,002	1,620	0,15	Pass
3	0,261	2,300	11,4	0,277	3,450	8,02	Pass
4	0,001	0,430	0,0	0,001	0,645	0,21	Pass
5	0,070	1,140	6,2	0,080	1,710	4,70	Pass
6	0,001	0,300	0,0	0,001	0,450	0,27	Pass
7	0,066	0,770	8,6	0,075	1,155	6,46	Pass
8	0,000	0,230	0,0	0,001	0,345	0,20	Pass
9	0,028	0,400	7,0	0,035	0,600	5,78	Pass
10	0,000	0,184	0,0	0,001	0,276	0,28	Pass
11	0,048	0,330	14,4	0,053	0,495	10,68	Pass
12	0,000	0,153	0,0	0,001	0,230	0,31	Pass
13	0,036	0,210	17,0	0,040	0,315	12,62	Pass
14	0,000	0,131	0,0	0,001	0,197	0,28	Pass
15	0,047	0,150	31,1	0,048	0,225	21,38	Pass
16	0,001	0,115	0,0	0,001	0,173	0,52	Pass
17	0,043	0,132	32,8	0,046	0,199	23,07	Pass
18	0,000	0,102	0,0	0,001	0,153	0,46	Pass
19	0,044	0,118	37,4	0,048	0,178	26,70	Pass
20	0,001	0,092	0,0	0,001	0,138	0,81	Pass
21	0,044	0,107	40,7	0,046	0,161	28,84	Pass
22	0,000	0,084	0,0	0,001	0,125	0,46	Pass
23	0,039	0,098	39,4	0,041	0,147	27,83	Pass
24	0,000	0,077	0,0	0,001	0,115	0,62	Pass
25	0,036	0,090	39,6	0,037	0,135	27,41	Pass
26	0,000	0,071	0,0	0,002	0,106	1,46	Pass
27	0,032	0,083	38,2	0,034	0,125	26,89	Pass
28	0,001	0,066	0,0	0,004	0,099	3,76	Pass
29	0,028	0,078	36,5	0,030	0,116	26,22	Pass
30	0,001	0,061	2,8	0,008	0,092	8,99	Pass
31	0,029	0,073	39,3	0,043	0,109	39,23	Pass
32	0,002	0,058	5,7	0,016	0,086	18,84	Pass
33	0,027	0,068	40,3	0,036	0,102	35,63	Pass
34	0,003	0,054	9,4	0,027	0,081	32,76	Pass
35	0,028	0,064	44,0	0,060	0,096	62,73	Pass
36	0,004	0,051	7,6	0,032	0,077	40,95	Pass
37	0,026	0,061	43,5	0,034	0,091	37,91	Pass
38	0,003	0,048	5,4	0,021	0,073	28,94	Pass
39	0,025	0,058	44,1	0,028	0,087	32,49	Pass
40	0,002	0,046	9,3	0,010	0,069	14,03	Pass

Induction zone 2 type 75.08014.110 with interface control module Slide (4f) HB

Current & Voltage Waveshape



Harmonic Contents – Graphic Presentation

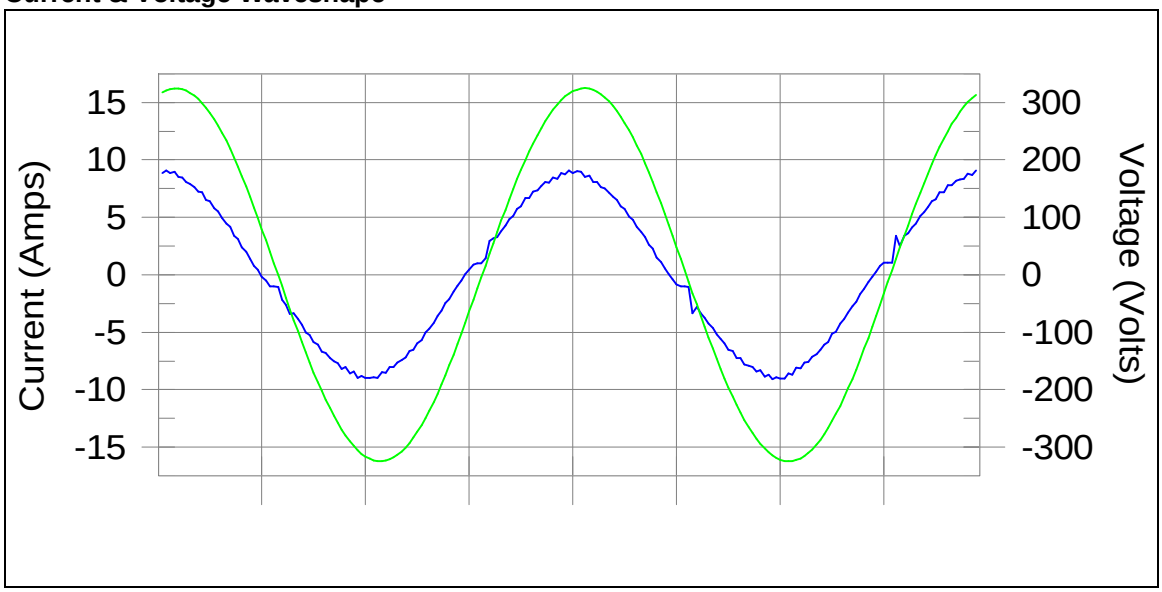


Numeric Presentation

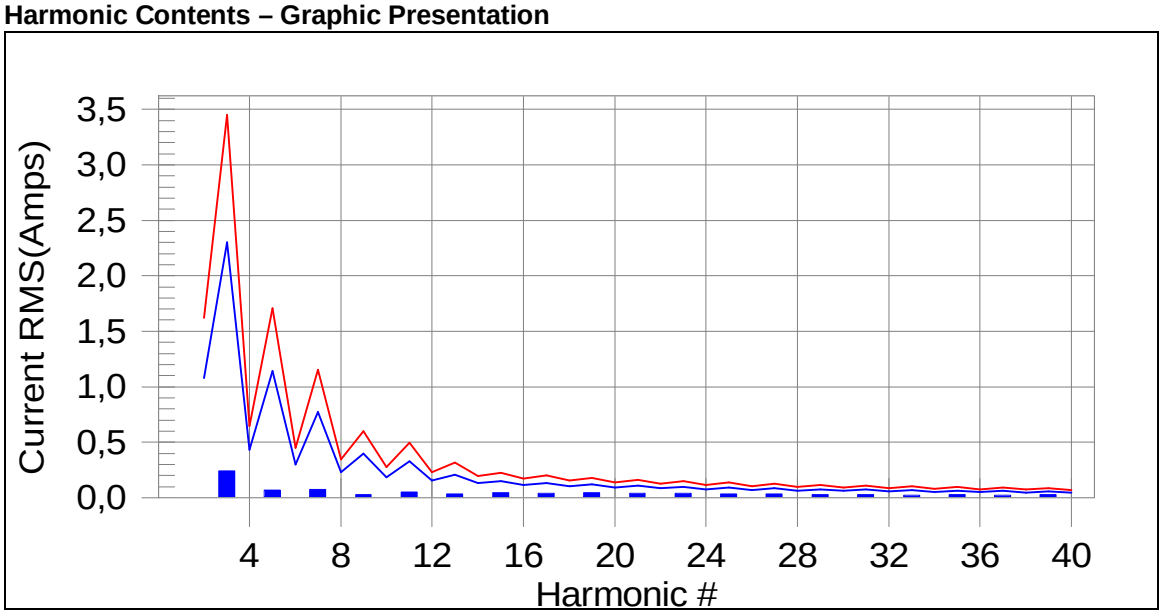
Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0,002	1,080	0,0	0,002	1,620	0,15	Pass
3	0,069	2,300	3,0	0,071	3,450	2,07	Pass
4	0,001	0,430	0,0	0,001	0,645	0,21	Pass
5	0,037	1,140	3,2	0,037	1,710	2,18	Pass
6	0,001	0,300	0,0	0,001	0,450	0,26	Pass
7	0,066	0,770	8,5	0,066	1,155	5,75	Pass
8	0,000	0,230	0,0	0,001	0,345	0,15	Pass
9	0,021	0,400	5,2	0,021	0,600	3,58	Pass
10	0,000	0,184	0,0	0,001	0,276	0,25	Pass
11	0,050	0,330	15,1	0,050	0,495	10,17	Pass
12	0,000	0,153	0,0	0,001	0,230	0,31	Pass
13	0,030	0,210	14,4	0,031	0,315	9,70	Pass
14	0,000	0,131	0,0	0,000	0,197	0,25	Pass
15	0,044	0,150	29,3	0,044	0,225	19,76	Pass
16	0,000	0,115	0,0	0,001	0,173	0,34	Pass
17	0,041	0,132	31,1	0,042	0,199	21,03	Pass
18	0,001	0,102	0,0	0,001	0,153	0,47	Pass
19	0,038	0,118	32,1	0,038	0,178	21,57	Pass
20	0,001	0,092	0,0	0,001	0,138	0,67	Pass
21	0,042	0,107	39,7	0,043	0,161	26,70	Pass
22	0,000	0,084	0,0	0,000	0,125	0,33	Pass
23	0,034	0,098	35,0	0,035	0,147	23,82	Pass
24	0,000	0,077	0,0	0,000	0,115	0,36	Pass
25	0,035	0,090	38,8	0,036	0,135	26,49	Pass
26	0,000	0,071	0,0	0,000	0,106	0,36	Pass
27	0,031	0,083	37,2	0,032	0,125	25,25	Pass
28	0,000	0,066	0,0	0,001	0,099	0,51	Pass
29	0,027	0,078	35,2	0,028	0,116	24,09	Pass
30	0,000	0,061	0,0	0,001	0,092	0,59	Pass
31	0,029	0,073	39,4	0,029	0,109	26,92	Pass
32	0,000	0,058	0,0	0,000	0,086	0,52	Pass
33	0,026	0,068	38,5	0,027	0,102	26,06	Pass
34	0,000	0,054	0,0	0,001	0,081	0,71	Pass
35	0,026	0,064	40,8	0,027	0,096	28,60	Pass
36	0,000	0,051	0,0	0,001	0,077	0,77	Pass
37	0,027	0,061	43,8	0,029	0,091	31,52	Pass
38	0,000	0,048	0,0	0,000	0,073	0,68	Pass
39	0,025	0,058	43,0	0,026	0,087	29,59	Pass
40	0,001	0,046	0,0	0,001	0,069	2,16	Pass

Induction zone 1 type 75.08014.210 with interface control module Lisa (2f) HB

Current & Voltage Waveshape



Harmonic Contents – Graphic Presentation

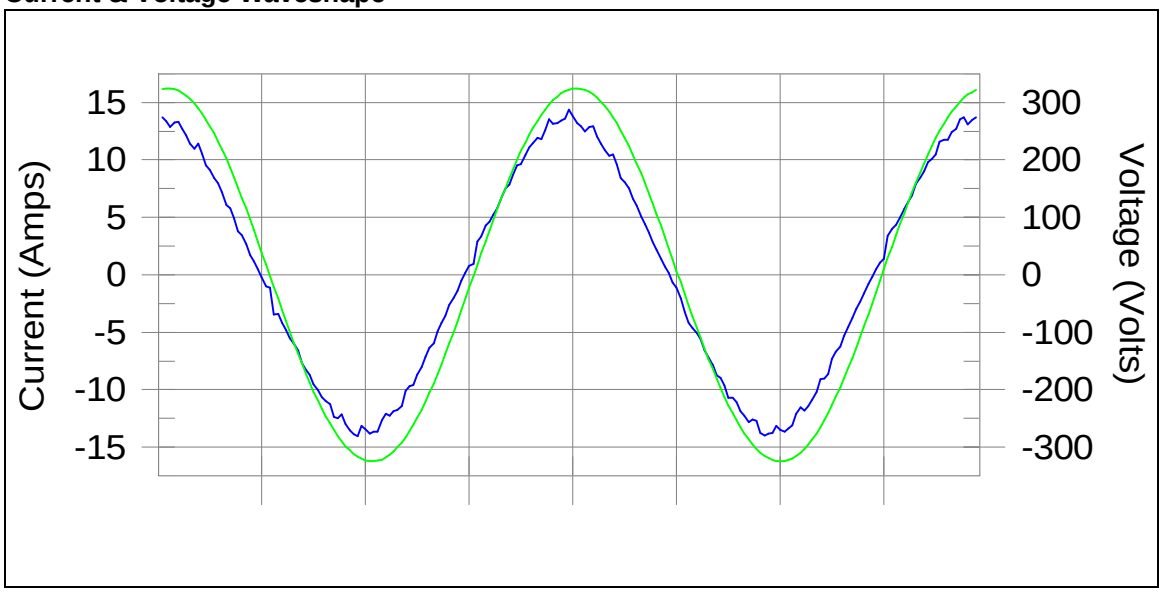


Numeric Presentation

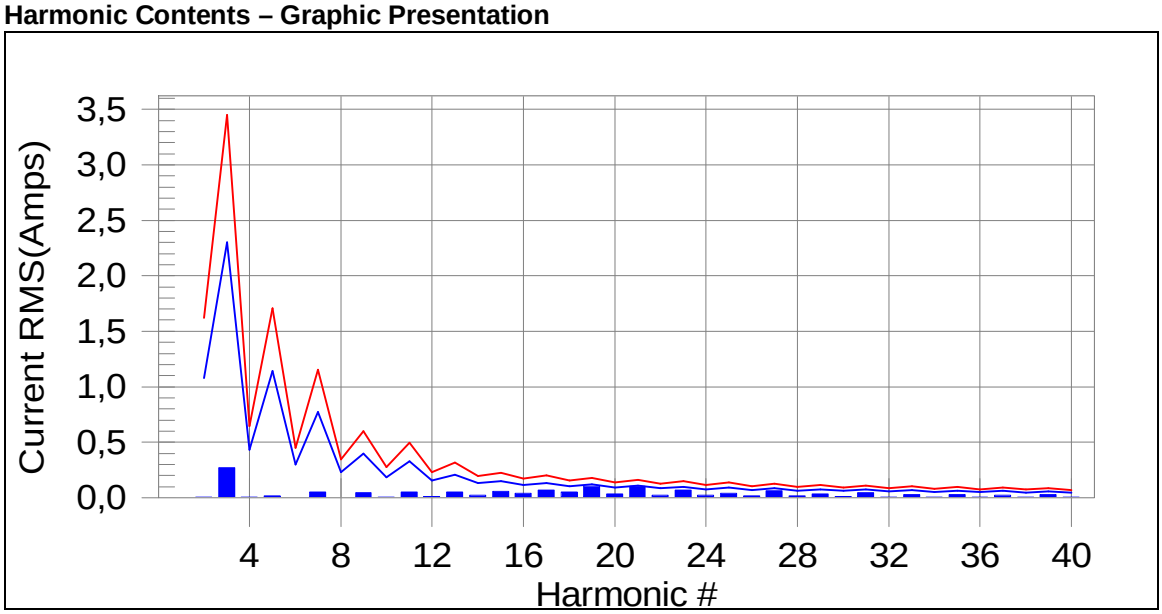
Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0,002	1,080	0,0	0,003	1,620	0,17	Pass
3	0,212	2,300	9,2	0,243	3,450	7,04	Pass
4	0,001	0,430	0,0	0,001	0,645	0,22	Pass
5	0,062	1,140	5,4	0,069	1,710	4,05	Pass
6	0,001	0,300	0,0	0,001	0,450	0,33	Pass
7	0,062	0,770	8,1	0,075	1,155	6,51	Pass
8	0,001	0,230	0,0	0,001	0,345	0,31	Pass
9	0,024	0,400	6,1	0,028	0,600	4,65	Pass
10	0,001	0,184	0,0	0,001	0,276	0,34	Pass
11	0,044	0,330	13,4	0,050	0,495	10,18	Pass
12	0,000	0,153	0,0	0,001	0,230	0,34	Pass
13	0,033	0,210	15,7	0,035	0,315	11,20	Pass
14	0,000	0,131	0,0	0,001	0,197	0,49	Pass
15	0,045	0,150	29,7	0,046	0,225	20,48	Pass
16	0,001	0,115	0,0	0,001	0,173	0,81	Pass
17	0,036	0,132	27,5	0,042	0,199	20,98	Pass
18	0,001	0,102	0,0	0,001	0,153	0,79	Pass
19	0,044	0,118	37,4	0,046	0,178	26,05	Pass
20	0,001	0,092	0,0	0,001	0,138	0,95	Pass
21	0,036	0,107	33,3	0,040	0,161	24,83	Pass
22	0,001	0,084	0,0	0,001	0,125	0,67	Pass
23	0,041	0,098	41,5	0,042	0,147	28,50	Pass
24	0,000	0,077	0,0	0,001	0,115	0,69	Pass
25	0,031	0,090	33,9	0,032	0,135	23,66	Pass
26	0,000	0,071	0,0	0,001	0,106	0,93	Pass
27	0,032	0,083	39,0	0,035	0,125	28,30	Pass
28	0,001	0,066	0,0	0,001	0,099	1,17	Pass
29	0,025	0,078	32,9	0,027	0,116	23,04	Pass
30	0,001	0,061	0,0	0,001	0,092	1,32	Pass
31	0,029	0,073	39,8	0,031	0,109	28,01	Pass
32	0,001	0,058	0,0	0,001	0,086	1,19	Pass
33	0,024	0,068	35,9	0,025	0,102	24,75	Pass
34	0,001	0,054	0,0	0,001	0,081	1,65	Pass
35	0,028	0,064	43,5	0,029	0,096	30,52	Pass
36	0,001	0,051	0,0	0,001	0,077	1,79	Pass
37	0,024	0,061	39,6	0,025	0,091	27,88	Pass
38	0,001	0,048	0,0	0,002	0,073	2,26	Pass
39	0,027	0,058	46,3	0,028	0,087	31,81	Pass
40	0,002	0,046	0,0	0,003	0,069	3,66	Pass

Induction zone 2 type 75.08014.210 with interface control module Lisa (2f) HB

Current & Voltage Waveshape



Harmonic Contents – Graphic Presentation



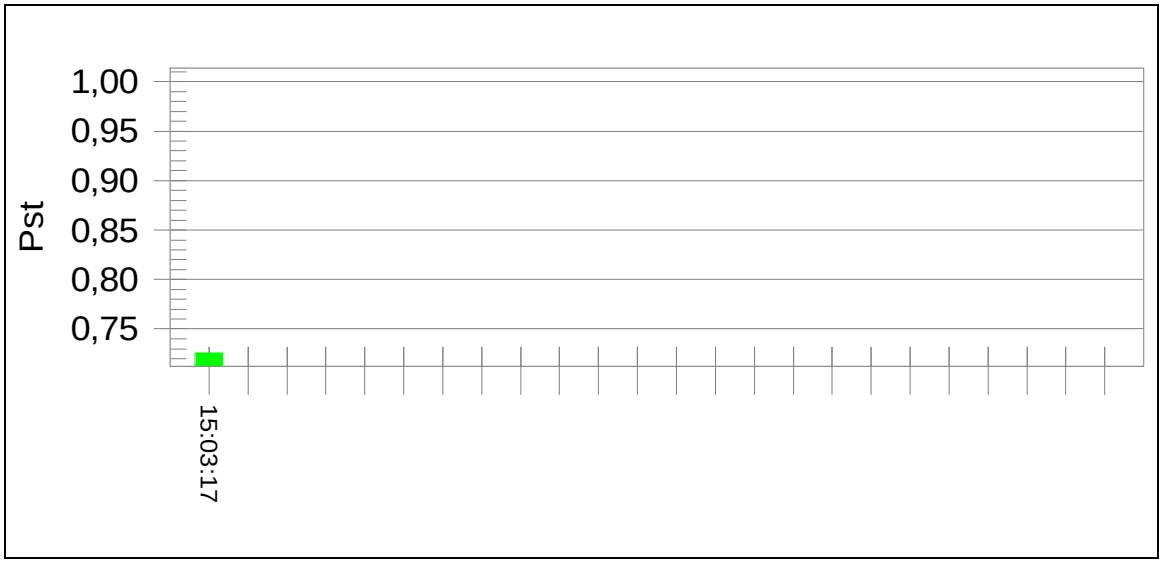
Numeric Presentation

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0,006	1,080	0,6	0,007	1,620	0,43	Pass
3	0,245	2,300	10,6	0,271	3,450	7,86	Pass
4	0,004	0,430	0,0	0,005	0,645	0,71	Pass
5	0,013	1,140	1,1	0,018	1,710	1,08	Pass
6	0,002	0,300	0,0	0,003	0,450	0,61	Pass
7	0,038	0,770	4,9	0,050	1,155	4,37	Pass
8	0,001	0,230	0,0	0,002	0,345	0,59	Pass
9	0,042	0,400	10,6	0,044	0,600	7,33	Pass
10	0,001	0,184	0,0	0,005	0,276	1,63	Pass
11	0,042	0,330	12,7	0,049	0,495	9,95	Pass
12	0,002	0,153	1,1	0,010	0,230	4,16	Pass
13	0,043	0,210	20,6	0,053	0,315	16,94	Pass
14	0,002	0,131	1,8	0,022	0,197	11,04	Pass
15	0,044	0,150	29,6	0,057	0,225	25,48	Pass
16	0,005	0,115	3,9	0,038	0,173	21,70	Pass
17	0,040	0,132	30,5	0,069	0,199	34,87	Pass
18	0,007	0,102	6,8	0,050	0,153	32,99	Pass
19	0,041	0,118	34,4	0,101	0,178	56,75	Pass
20	0,008	0,092	8,9	0,037	0,138	26,54	Pass
21	0,035	0,107	33,1	0,106	0,161	65,88	Pass
22	0,005	0,084	7,6	0,021	0,125	16,99	Pass
23	0,030	0,098	30,5	0,070	0,147	47,92	Pass
24	0,002	0,077	2,7	0,025	0,115	21,47	Pass
25	0,021	0,090	23,5	0,038	0,135	27,96	Pass
26	0,004	0,071	5,4	0,019	0,106	18,29	Pass
27	0,029	0,083	34,9	0,062	0,125	49,43	Pass
28	0,002	0,066	2,8	0,015	0,099	15,27	Pass
29	0,024	0,078	30,8	0,034	0,116	29,66	Pass
30	0,002	0,061	4,2	0,012	0,092	12,79	Pass
31	0,027	0,073	37,4	0,045	0,109	41,73	Pass
32	0,002	0,058	2,6	0,007	0,086	8,06	Pass
33	0,024	0,068	35,5	0,028	0,102	27,00	Pass
34	0,002	0,054	0,0	0,005	0,081	6,41	Pass
35	0,023	0,064	36,5	0,030	0,096	31,03	Pass
36	0,003	0,051	5,6	0,006	0,077	7,71	Pass
37	0,019	0,061	31,1	0,026	0,091	28,15	Pass
38	0,004	0,048	7,9	0,007	0,073	9,79	Pass
39	0,024	0,058	41,1	0,027	0,087	30,71	Pass
40	0,002	0,046	0,0	0,003	0,069	4,81	Pass

VOLTAGE FLUCTUATIONS AND FLICKER

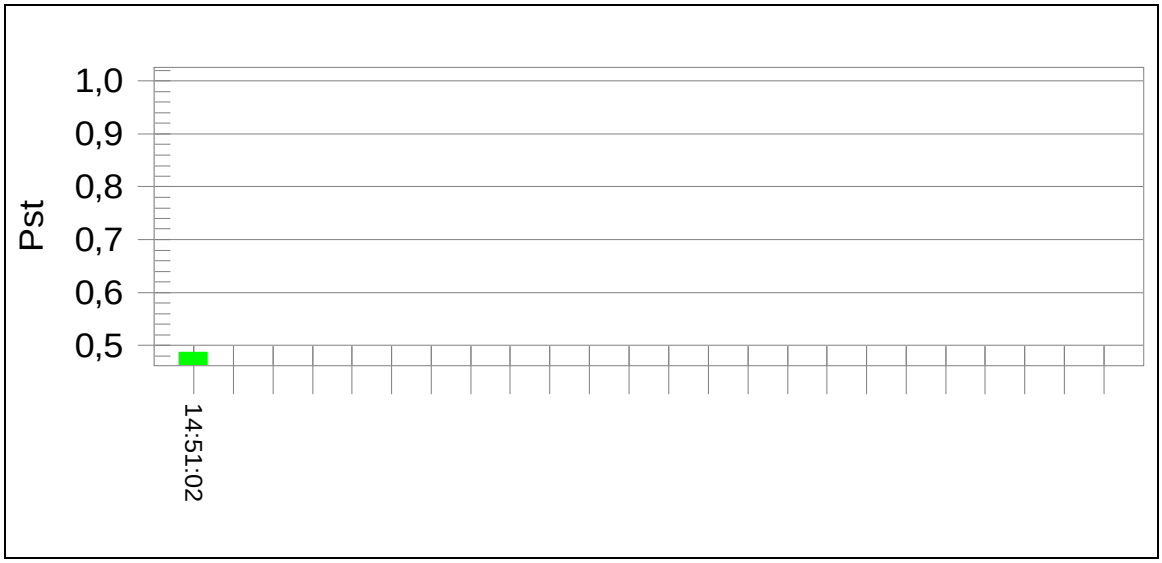
Induction zone 1 type 75.08014.110 with interface control module Slide (4f) HB

Parameter	Limit	Measured	Result
Dmax	4 %	0.87 %	PASS
Dc	3.3 %	0.81 %	PASS
Dt	500 msec	0.0 msec	PASS
Pst	1.0	0.726	PASS
Note:			



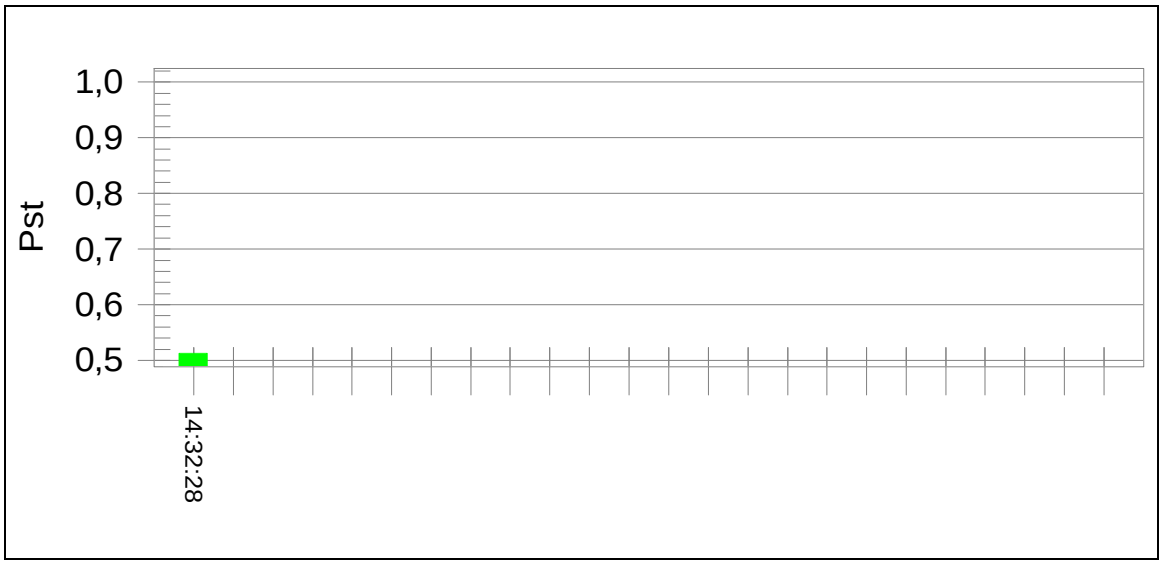
Induction zone 2 type 75.08014.110 with interface control module Slide (4f) HB

Parameter	Limit	Measured	Result
Dmax	4 %	0.51 %	PASS
Dc	3.3 %	0.44 %	PASS
Dt	500 msec	0.0 msec	PASS
Pst	1.0	0.487	PASS
Note:			



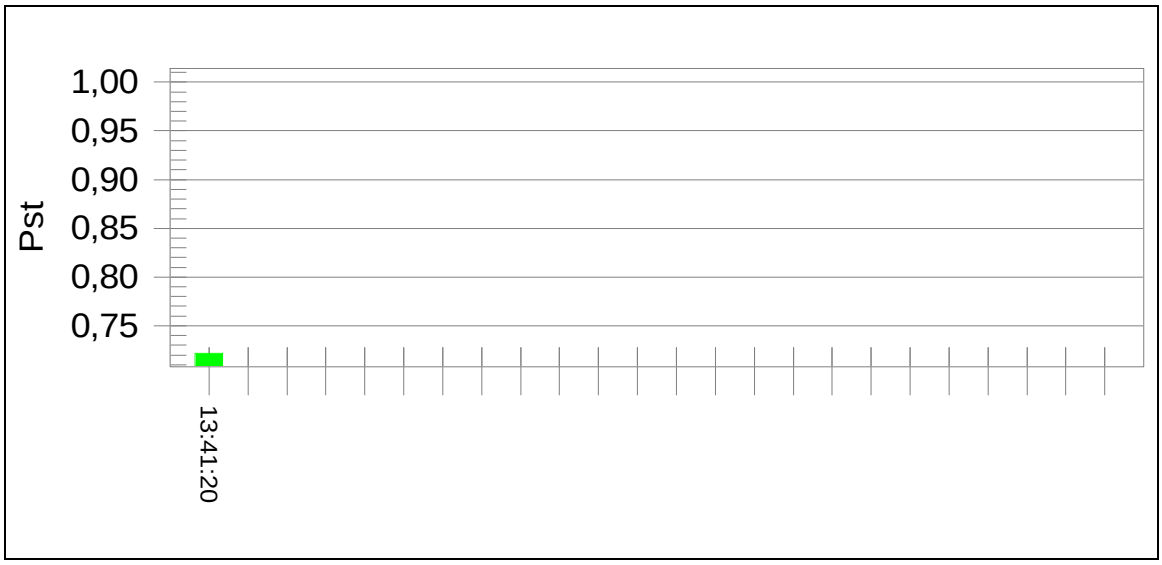
Induction zone 1 type 75.08014.210 with interface control module Lisa (2f) HB

Parameter	Limit	Measured	Result
Dmax	4 %	0.88 %	PASS
Dc	3.3 %	0.87 %	PASS
Dt	500 msec	0.0 msec	PASS
Pst	1.0	0.513	PASS
Note:			



Induction zone 2 type 75.08014.210 with interface control module Lisa (2f) HB

Parameter	Limit	Measured	Result
Dmax	4 %	1.53 %	PASS
Dc	3.3 %	1.52 %	PASS
Dt	500 msec	0.0 msec	PASS
Pst	1.0	0.722	PASS
Note:			



COMPONENT LISTS

Object / part No.	Manufacturer/ trademark	Type / model	Technical data
Electronic Power board * 2	E.G.O	75.08010.600	-
Touch control PCB	E.G.O	75.13068.400	-
Interface control module	**EGO**	**75.13105.002**	-
	EGO	**75.13105.102**	-
Induction generators for hob	E.G.O	75.08010.101	1400W
	E.G.O	75.08010.201	2300W
Induction coils XO3400	**EGO**	**75.08.14.110**	**220-240 V, 15 A, 50 Hz, T85, SW: 7599740 V 106**
XO3700	**EGO**	**75.08014.210**	**220-240 V, 16 A, 50 Hz, T85, SW: 7599745 V 106**
Supplementary information: New alternative components marked with **bold**. The induction coil EGO 75.08010.102 is identical to previously tested induction coil EGO 75.08010.101 except model name and is therefore not tested.			