

**VERIFICATION  
Of Compliance**

*Order No.* JGZ0511171  
*Type of equipment* ALL ACCESS BASS AMPLIFICATION  
*Applicant* Ashdown Design&Marketing Ltd.  
Park Farm, Inworth, Colchester, Essex CO5 9SH, UK  
*Manufacturing site* Dongguan Jingheng Electron Co., Ltd.  
Shenshan Industrial City, Hengli Town,  
Dongguan City, Guangdong, 523465 P. R. China  
*Type designation* ASHDOWN Five fifteen  
*Technical data* 220VAC, 50/60Hz; 230VAC, 50/60Hz; 240VAC, 50/60Hz 150W

**The submitted sample of the above equipment has been tested for CE marking according to the following European Directives:**

**- the EMC Directive 89/336/EEC**

*Standard(s) used for showing compliance with the essential requirements in the specified directive(s):*

<i>Standard(s)</i>	<i>Test report(s)</i>	<i>Issued by</i>	<i>Date(s)</i>
EN55103-1: 1996	JGZ0511171-1	ETL SEMKO	11 April 2006
EN55103-2: 1996	JGZ0511171-1	ETL SEMKO	11 April 2006

The referred test report(s) show that the product complies with standard(s) recognized as giving presumption of compliance with the essential requirements in the above listed EU Directive(s).

After preparation of the necessary technical documentation as well as the conformity declaration the CE marking as shown below can be affixed on the equipment. Other relevant Directives have to be observed.

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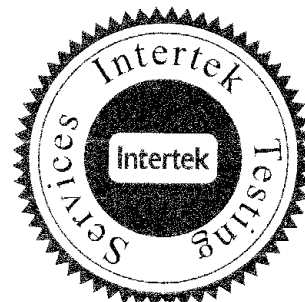
**ETL SEMKO GUANG ZHOU**



Derek Feng  
Assistant Manager  
Date: 11 April 2006

Note: This verification is part of the full report and should be read in conjunction with it.

Intertek Testing Service Shenzhen Ltd. Guangzhou GDD Branch  
3/F., Hengyun Building, 728 Kaifa Ave.,  
Guangzhou Economic & Technological Development District, Guangzhou, China



**EMC VERIFICATION SUMMARY**

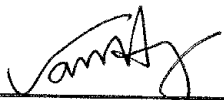
Report No. JGZ0511171-1  
 Others


ITE                       Electric household product

Product Description: ALL ACCESS BASS AMPLIFICATION Client: <b>Ashdown Design&amp;Marketing Ltd.</b> <b>Park Farm, Inworth, Colchester, Essex</b> <b>CO5 9SH, UK</b>					
Model: ASHDOWN Five fifteen		Test Date: 13 March to 20 March 2006			
Sample Receipt Date: 13 March 2006					
<input checked="" type="checkbox"/> 1 <sup>st</sup> TEST  <input type="checkbox"/> 2 <sup>nd</sup> TEST (after modification)		ALL TESTS WERE CONDUCTED IN ACCORDANCE WITH: * EN 55103-1: 1996 * EN 55103-2: 1996 * EN 55103-1 (EN 61000-3-2): 1996 * EN 55103-1 (EN 61000-3-3): 1996 * EN 55103-2 (EN 61000-4-2): 1996 * EN 55103-2 (EN 61000-4-3): 1996 * EN 55103-2 (EN 61000-4-4): 1996 * EN 55103-2 (EN 61000-4-5): 1996 * EN 55103-2 (EN 61000-4-6): 1996 * EN 55103-2 (EN 61000-4-11): 1996			
Test Result	ok	not ok	Test Result	ok	not ok
EN 55103-1: 1996	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EN 61000-4-4: 1995+	<input type="checkbox"/>	<input type="checkbox"/>
EN 55103-2: 1996	<input checked="" type="checkbox"/>	<input type="checkbox"/>	A1: 2001/A2: 2001	<input checked="" type="checkbox"/>	<input type="checkbox"/>
EN 61000-3-2: 2000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EN 61000-4-6: 1996+A1: 2001	<input checked="" type="checkbox"/>	<input type="checkbox"/>
EN 61000-3-3: 1995+A1: 2001	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EN 61000-4-5: 1995+A1: 2001	<input checked="" type="checkbox"/>	<input type="checkbox"/>
EN 61000-4-2: 1995+A1: 1998+A2: 2001	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EN 61000-4-11: 1994+A1: 2001	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			EN 61000-4-3: 2002+A1: 2002	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Tested By:**

**Approved By:**

  
 \_\_\_\_\_  
**Sam Dong – Engineer**                      *Signature*

  
 \_\_\_\_\_  
**Tendge Huang – Project Engineer**                      *Signature*  
 \_\_\_\_\_  
**11 April 2006**                      *Date*

- This summary is part of the full report and should be read in conjunction with it.
- The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.
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**EMC Results Conclusion  
(with Justification)**

RE: EMC Testing Pursuant to EMC Directive 89/336/EEC Performed On the ALL ACCESS BASS AMPLIFICATION,  
Model: Five fifteen.

We tested the ALL ACCESS BASS AMPLIFICATION, Model Five fifteen, to determine if it was in compliance with the relevant EN standards as marked on the EMC Verification Summary. We found that the unit met the requirement of EN55103-1, EN 61000-3-2, EN 61000-3-3, EN55103-2 (EN 61000-4-2), EN55103-2 (EN 61000-4-4), EN55103-2 (EN 61000-4-6), EN55103-2 (EN 61000-4-5), EN55103-2 (EN 61000-4-3) & EN55103-2 (EN 61000-4-11) standards when tested as received.

The production units are required to conform to the initial sample as received when the units are placed on the market.

Ctrl. No.: 1.2.1

- This summary is part of the full report and should be read in conjunction with it.
- The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.
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**LABORATORY MEASUREMENTS**

**Configuration**

<b>Equipment Under Test (EUT):</b>	ALL ACCESS BASS AMPLIFICATION
<b>Model:</b>	Five fifteen
<b>Serial No.</b>	Not supplied by the client
<b>Support Equipment:</b>	N/A
<b>Power Source:</b>	220VAC, 50/60Hz; 230VAC, 50/60Hz; 240VAC, 50/60Hz 150W

**Emission**

**EN55103-1  
RFI Voltage Test**

Test Requirement:	EN55022
Test Method:	EN55022
Frequency Range:	150KHz to 30MHz
Class / Severity:	Class B
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth)
	Quasi-Peak if maximised peak within 6dB of Quasi-Peak limit

**Measurement Data:**

**L Line**

Frequency (MHz)	Quasi-Peak		Average	
	Disturbance level dB(μV)	Permitted limit dB(μV)	Disturbance level dB(μV)	Permitted limit dB(μV)
0.39	<40	58.1	<30	48.1
0.42	<40	57.5	<30	47.5
4.41	<40	56.0	<30	46.0
14.03	<40	60.0	<30	50.0
14.22	<40	60.0	<30	50.0
22.00	<40	60.0	<30	50.0
30.00	<40	60.0	<30	50.0

**N Line**

Frequency (MHz)	Quasi-Peak		Average	
	Disturbance level dB( $\mu$ V)	Permitted limit dB( $\mu$ V)	Disturbance level dB( $\mu$ V)	Permitted limit dB( $\mu$ V)
0.39	<40	58.1	<30	48.1
0.42	<40	57.5	<30	47.5
4.41	<40	56.0	<30	46.0
14.03	<40	60.0	<30	50.0
14.22	<40	60.0	<30	50.0
22.00	<40	60.0	<30	50.0
30.00	<40	60.0	<30	50.0

Notes: 1. The above data and table were recorded for the tests on the mains terminal.

2. Uncertainty:  $\pm 3.5$  dB at a level of confidence of 95%.

Ctrl. No.: 2.2.4

**EN55103-1  
Radiated magnetic fields**

Test Requirement:	EN55103-1
Test Method:	EN55103-1
Frequency Range:	50Hz to 50KHz
Detector:	Peak for pre-scan (10Hz Resolution Bandwidth)
	Quasi-Peak if maximised peak within 6dB of Quasi-Peak limit

**Measurement Data:**

Frequency (Hz)	Voltage(mV)	Test Result H(A/m)	Limit (A/m)	Side
8000	0.035	0.001	0.010	B
45000	0.027	0.001	0.010	B
8000	0.018	0.001	0.010	T
48000	0.024	0.001	0.010	T
50	0.005	0.025	1.000	F
48000	0.031	0.001	0.010	F
8000	0.035	0.001	1.000	L
48000	0.031	0.001	0.010	L
8000	0.041	0.001	1.000	R
48000	0.030	0.001	0.010	R
8000	0.025	0.001	0.010	Rear
48000	0.020	0.001	0.010	Rear

Notes: 1. The above data and table were recorded for the tests on the enclose terminal.

2. Uncertainty:  $\pm 1.8$  dB at a level of confidence of 95%.

**EN55103-1  
Conducted Disturbance Test**

Test Requirement:	EN55103-1
Test Method:	EN55022
Frequency Range:	150KHz to 30MHz
Class / Severity:	Class B
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth)
	Quasi-Peak if maximised peak within 6dB of Quasi-Peak limit

**Measurement Data:**

**Input port**

Model No.: After eight				
Frequency (MHz)	Quasi-Peak		Average	
	Reading (dBμA)	Limits (dBμA)	Reading (dBμA)	Limits (dBμA)
0.438	<30	41.8	<20	31.8
0.522	<30	40.0	<20	30.0
0.634	<30	40.0	<20	30.0
20.958	<30	40.0	<20	30.0

**Output port**

Model No.: After eight				
Frequency (MHz)	Quasi-Peak		Average	
	Reading (dBμA)	Limits (dBμA)	Reading (dBμA)	Limits (dBμA)
0.438	<30	41.8	<20	31.8
0.522	<30	40.0	<20	30.0
0.806	<30	40.0	<20	30.0
20.958	<30	40.0	<20	30.0

- Notes: 1. The above data and table were recorded for the tests on the mains terminal.  
2. Uncertainty: ±3.5 dB at a level of confidence of 95%.



**Data Table**

**Radiated Scan  
Pursuant to EN55103-1 Emissions Requirement**

Test Requirement:	EN55022
Test Method:	EN55022
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m
Class:	Class B
Detector:	Peak for pre-scan (120kHz resolution bandwidth)
	Quasi-Peak if maximised peak within 6dB of limit

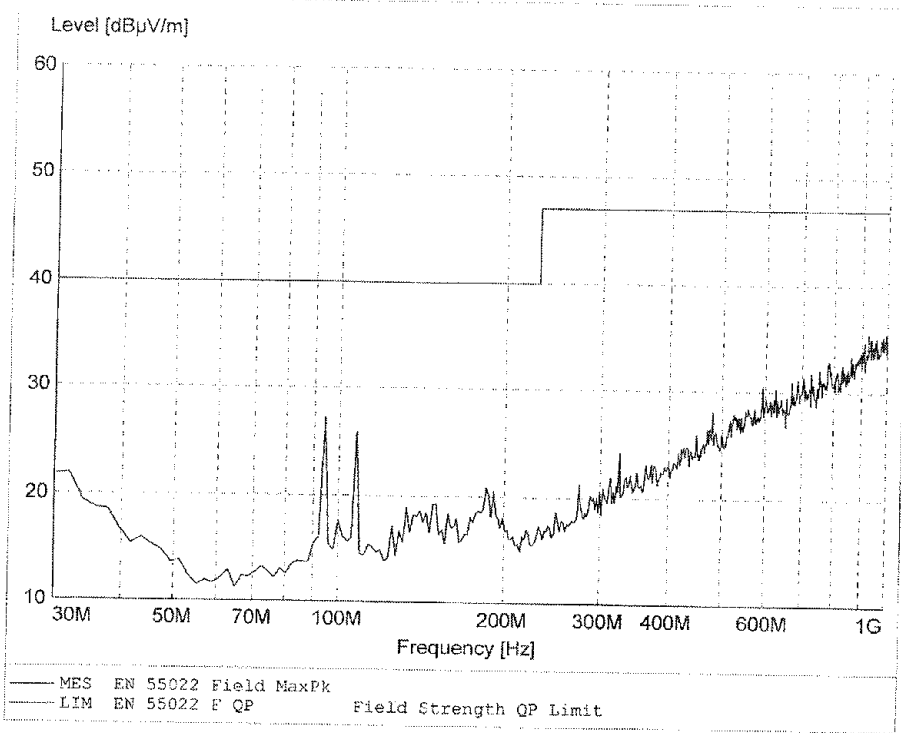
**Measurement Data:**

Antenna Polarity	Frequency (MHz)	Measured Net at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	30.00	<30	40	<-10.0
H	80.00	<30	40	<-10.0
H	500.00	<35	47	<-12.0
H	900.00	<35	47	<-12.0
V	30.00	<30	40	<-10.0
V	100.00	<30	40	<-10.0
V	900.00	<35	47	<-12.0

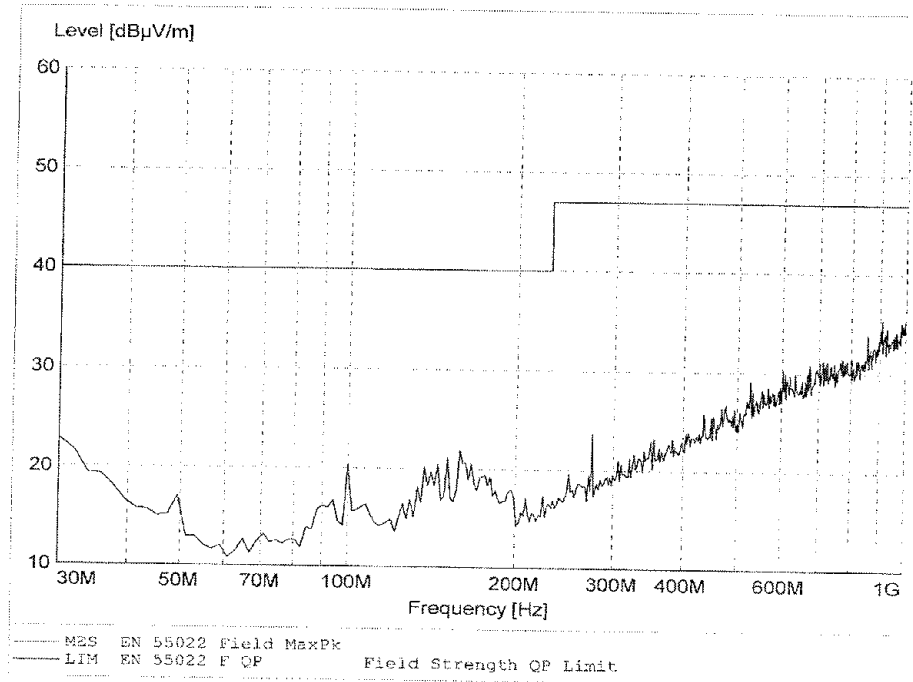
**Notes:**

1. Quasi-Peak Detector Data.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 30 MHz to 1000 MHz.
4. Only emissions significantly above equipment noise floor are reported.
5. Uncertainty:  $\pm 4.2$  dB at a level of confidence of 95%.

Horizontal



Vertical



**EN 61000-3-2  
Harmonics**

Test Requirement:	EN 61000-3-2
Test Method:	EN 61000-3-2
Frequency Range	100Hz to 2kHz
Measurement Time:	2.5 mins
Class / Severity:	Class A

Note: Test data of Ctrl. No.: 5.1.1 consisting of three pages are attached.



### Harmonics – Class-A per Ed. 2.1(Run time)

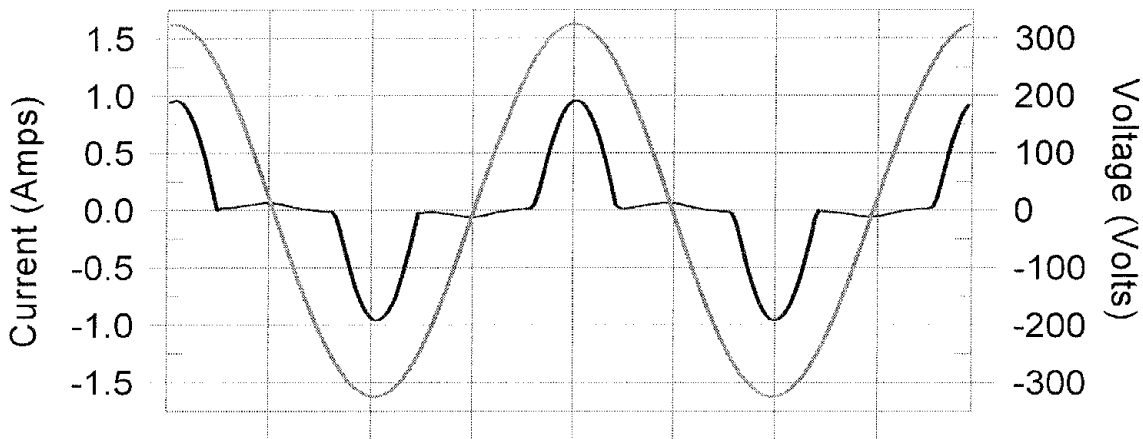
EUT: Five fifteen  
Test category: Class-A per Ed. 2.1 (European limits)  
Test date: 2006-3-6  
Test duration (min): 2.5

Tested by: GWB  
Test Margin: 100  
Start time: 16:27:12  
End time: 16:29:52  
Data file name: H-000216.cts\_data

Test Result: Pass

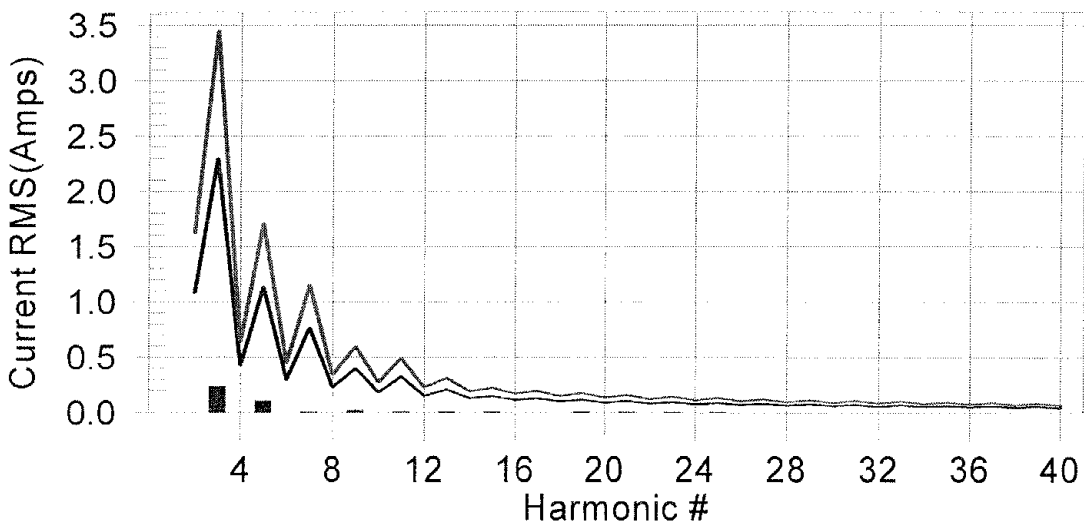
Source qualification: Normal

#### Current & voltage waveforms



#### Harmonics and Class A limit line

#### European Limits



Test result: Pass Worst harmonic was #3 with 6.93% of the limit.

## Current Test Result Summary (Run time)

EUT: Five fifteen	Tested by: GWB
Test category: Class-A per Ed. 2.1 (European limits)	Test Margin: 100
Test date: 2006-3-6	Start time: 16:27:12
Test duration (min): 2.5	End time: 16:29:52
	Data file name: H-000216.cts_data

Test Result: Pass	Source qualification: Normal
THC(A): 0.26    I-THD(pk%): 74.07	POHC(A): 0.005    POHC Limit(A): 0.251
Highest parameter values during test:	
V_RMS (Volts): 229.71	Frequency(Hz): 50.00
I_Peak (Amps): 1.041	I_RMS (Amps): 0.445
I_Fund (Amps): 0.358	Crest Factor: 2.344
Power (Watts): 81.8	Power Factor: 0.803

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	0.1	0.002	1.620	0.12	Pass
3	0.235	2.300	10.2	0.239	3.450	6.93	Pass
4	0.001	0.430	0.2	0.001	0.645	0.21	Pass
5	0.106	1.140	9.3	0.108	1.710	6.32	Pass
6	0.000	0.300	0.2	0.001	0.450	0.16	Pass
7	0.004	0.770	0.5	0.004	1.155	0.37	Pass
8	0.000	0.230	0.1	0.000	0.345	0.13	Pass
9	0.026	0.400	6.6	0.027	0.600	4.43	Pass
10	0.000	0.184	0.1	0.000	0.276	0.11	Pass
11	0.012	0.330	3.7	0.013	0.495	2.57	Pass
12	0.000	0.153	0.1	0.000	0.230	0.12	Pass
13	0.007	0.210	3.3	0.007	0.315	2.29	Pass
14	0.000	0.131	0.2	0.000	0.197	0.15	Pass
15	0.009	0.150	5.8	0.009	0.225	3.95	Pass
16	0.000	0.115	0.1	0.000	0.173	0.08	Pass
17	0.002	0.132	1.3	0.002	0.199	0.91	Pass
18	0.000	0.102	0.2	0.000	0.153	0.20	Pass
19	0.005	0.118	4.4	0.005	0.178	2.94	Pass
20	0.000	0.092	0.3	0.000	0.138	0.22	Pass
21	0.002	0.107	2.1	0.002	0.161	1.47	Pass
22	0.000	0.084	0.3	0.000	0.125	0.22	Pass
23	0.003	0.098	2.8	0.003	0.147	1.92	Pass
24	0.000	0.077	0.1	0.000	0.115	0.13	Pass
25	0.002	0.090	2.6	0.002	0.135	1.81	Pass
26	0.000	0.071	0.1	0.000	0.106	0.10	Pass
27	0.001	0.083	1.6	0.001	0.125	1.09	Pass
28	0.000	0.066	0.2	0.000	0.099	0.18	Pass
29	0.002	0.078	2.6	0.002	0.116	1.74	Pass
30	0.000	0.061	0.1	0.000	0.092	0.07	Pass
31	0.001	0.073	1.1	0.001	0.109	0.79	Pass
32	0.000	0.058	0.2	0.000	0.086	0.16	Pass
33	0.001	0.068	2.1	0.001	0.102	1.47	Pass
34	0.000	0.054	0.1	0.000	0.081	0.13	Pass
35	0.001	0.064	1.3	0.001	0.096	0.96	Pass
36	0.000	0.051	0.1	0.000	0.077	0.11	Pass
37	0.001	0.061	1.6	0.001	0.091	1.11	Pass
38	0.000	0.048	0.2	0.000	0.073	0.17	Pass
39	0.001	0.058	1.6	0.001	0.087	1.10	Pass
40	0.000	0.046	0.1	0.000	0.069	0.10	Pass

## Voltage Source Verification Data (Run time)

EUT: Five fifteen Tested by: GWB  
 Test category: Class-A per Ed. 2.1 (European limits) Test Margin: 100  
 Test date: 2006-3-6 Start time: 16:27:12 End time: 16:29:52  
 Test duration (min): 2.5 Data file name: H-000216.cts\_data

Test Result: Pass Source qualification: Normal

**Highest parameter values during test:**

Voltage (Vrms):	229.71	Frequency(Hz):	50.00
I_Peak (Amps):	1.041	I_RMS (Amps):	0.445
I_Fund (Amps):	0.358	Crest Factor:	2.344
Power (Watts):	81.8	Power Factor:	0.803

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.158	0.459	34.36	OK
3	0.632	2.067	30.57	OK
4	0.073	0.459	15.84	OK
5	0.051	0.919	5.59	OK
6	0.056	0.459	12.20	OK
7	0.031	0.689	4.49	OK
8	0.028	0.459	6.05	OK
9	0.033	0.459	7.16	OK
10	0.034	0.459	7.46	OK
11	0.032	0.230	13.92	OK
12	0.024	0.230	10.30	OK
13	0.029	0.230	12.76	OK
14	0.032	0.230	13.89	OK
15	0.020	0.230	8.65	OK
16	0.029	0.230	12.84	OK
17	0.028	0.230	12.07	OK
18	0.030	0.230	13.19	OK
19	0.025	0.230	10.89	OK
20	0.028	0.230	12.32	OK
21	0.015	0.230	6.73	OK
22	0.020	0.230	8.86	OK
23	0.014	0.230	6.17	OK
24	0.015	0.230	6.58	OK
25	0.019	0.230	8.31	OK
26	0.017	0.230	7.37	OK
27	0.017	0.230	7.23	OK
28	0.014	0.230	6.15	OK
29	0.012	0.230	5.21	OK
30	0.012	0.230	5.38	OK
31	0.011	0.230	4.94	OK
32	0.012	0.230	5.11	OK
33	0.014	0.230	5.88	OK
34	0.009	0.230	3.98	OK
35	0.009	0.230	3.71	OK
36	0.009	0.230	3.94	OK
37	0.009	0.230	3.96	OK
38	0.008	0.230	3.52	OK
39	0.010	0.230	4.23	OK
40	0.011	0.230	4.63	OK

**EN 61000-3-3  
Voltage Fluctuations**

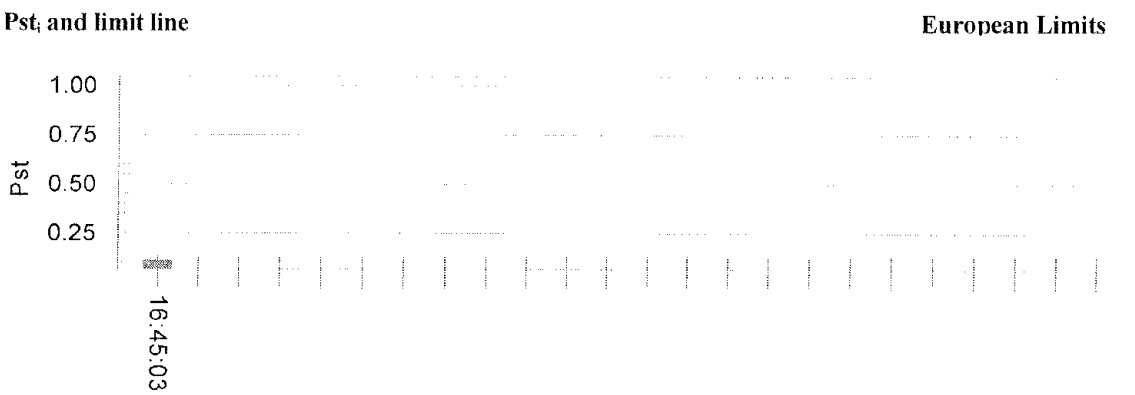
Test Requirement:	EN 61000-3-3
Test Method:	Clause A.3 of EN 61000-3-3
Measurement Time:	10 mins
Class / Severity:	Clause 5 of EN 61000-3-3

Note: A data table of Ctrl. No.: 5.2.1 consisting of one page is attached.

## Flicker Test Summary per EN61000-3-3 (Run time)

<b>EUT:</b> Five fifteen <b>Test category:</b> dt,dmax,dc and Pst (European limits) <b>Test date:</b> 2006-3-6 <b>Test duration (min):</b> 10	<b>Tested by:</b> GWB <b>Test Margin:</b> 100 <b>End time:</b> 16:45:03 <b>Data file name:</b> F-000219.cts_data
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**Test Result:** Pass                      **Status:** Test Completed



**Parameter values recorded during the test:**

<b>Vrms at the end of test (Volt):</b>	229.46		
<b>Highest dt (%):</b>	-0.80	<b>Test limit (%):</b>	3.30 <b>Pass</b>
<b>Time(mS) &gt; dt:</b>	0.0	<b>Test limit (mS):</b>	500.0 <b>Pass</b>
<b>Highest dc (%):</b>	0.00	<b>Test limit (%):</b>	3.30 <b>Pass</b>
<b>Highest dmax (%):</b>	0.48	<b>Test limit (%):</b>	6.00 <b>Pass</b>
<b>Highest Pst (10 min. period):</b>	0.111	<b>Test limit:</b>	1.000 <b>Pass</b>



**Immunity**

Performance Criteria:

- Criterion A: The apparatus shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the apparatus is used as intended.
- Criterion B: After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended.
- Criterion C: Loss of function is allowed, provided the function is self recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer’s instructions.

**EN 61000-4-2  
Electrostatic Discharge**

**Test Summary (Pursuant to EN55103-2)**

Port:	Enclosure
Basic Standard:	EN 61000-4-2
Required Performance Criterion:	B
Limit:	8.0 kV (Air Discharge)
	4.0 kV (Contact Discharge)
	4.0 kV (Indirect Contact Discharge)
Operating Temperature:	24.0 °C
Operating Humidity:	56 %RH
Atmospheric Pressure:	101kPa

**Test Results**

**EN 61000-4-2  
Electrostatic Discharge**

**Direct Application of ESD**

Direct Contact Discharge

- Single contact discharge at metal part with > 1 second interval
- At least 10 positive and 10 negative discharges

Applied Voltage (kV)	No. of Discharge	Result (Pursuant to EN61000-4-2, criterion B)
4	60	OK

Direct Air Discharge

- Single air discharge at non-conductive enclosure with > 1 second interval
- At least 10 positive + 10 negative discharges

Applied Voltage (kV)	No. of Discharge	Result (Pursuant to EN61000-4-2, criterion B)
8	60	OK

**EN 61000-4-2  
Electrostatic Discharge**

**Indirect Application of ESD**

Horizontal Coupling Plane under the EUT

- ESD probe shall be positioned horizontally to the centre of the edge of HCP which is located at a distance of 0.1m from the EUT, with Contact Discharge Electrode touching the HCP
- At least 10 positive and 10 negative single discharges

Applied Voltage (kV)	No. of Discharge	Result (pursuant to EN61000-4-2, criterion B)
4	50	OK

Vertical Coupling Plane beside the EUT

- ESD probe shall be positioned horizontally to the centre of the edge of VCP which is located vertically 0.1m from the EUT, with Contact Discharge Electrode touching the VCP
- At least 10 positive and 10 negative single discharges
- Apply discharges to the earth reference plane on each accessible side of the EUT.

Applied Voltage (kV)	No. of Discharge	Result (pursuant to EN61000-4-2, criterion B)
4	60	OK

**EN 61000-4-6  
Injected Current (0.15 MHz to 80 MHz)**

**Test Summary (Pursuant to EN55103-2)**

Port:	A.C. Power Lines	D.C. Power Lines, Signal Lines and Telecommunication Lines
Basic Standard:	EN 61000-4-6	
Required Performance Criterion:	A	
Limit:	3.0V (r.m.s.)	3.0V (r.m.s.)
Test Modulation:	1 kHz, 80% AM	
Frequency	0.15 MHz to 80 MHz	

**Note: The EUT was tested under manufacturer's declaration in the User's instructions for this item.**

**Test Results**

**EN 61000-4-6  
Injected Current (0.15 MHz to 80 MHz)**

Port:	Frequency (MHz)	Level (Pursuant to EN55103-2)	Result
A.C. Power Lines	0.15 to 80	3V (r.m.s.)	OK
D.C. Power Lines	0.15 to 80	3V (r.m.s.)	N/A
Signal Lines	0.15 to 80	3V (r.m.s.)	OK
Telecommunication Lines	0.15 to 80	3V (r.m.s.)	N/A

- Meet criterion A - operate as intended during and after the test
- Meet criterion B - operate as intended after the test
- Meet criterion C - loss/error of function
- Additional Information
  - No observable change
  - EUT stopped operation and could / could not be reset by operator at \_\_\_\_ V of Injected Current.
  - EUT was in abnormal operation:  
- operation mode was changed from \_\_\_\_ to \_\_\_\_ at \_\_\_\_ V of Injected Current.
  - \_\_\_\_\_

**Susceptibility (ERF)  
(50Hz to 10 KHz)**

**Test Summary (Pursuant to EN55103-2)**

Port:	Enclose	
Basic Standard:	EN55103-2	
Required Performance Criterion:	A	
Limit:	3.0-0.03A/m 50Hz-5kHz	0.03A/m 5kHz-10kHz
Frequency	50 Hz to 10 KHz	

**Note: The EUT was tested under manufacturer's declaration in the User's instructions for this item.**

Input 1kHz sine wave, 1/8w output  
S/N: 58.2 Environment: E3

Frequency (Hz)	S/N	Result
50	58.1	Pass
100	58.2	Pass
200	58.1	Pass
400	58.0	Pass
800	58.0	Pass
1600	58.0	Pass
3200	58.0	Pass
5000	58.0	Pass
6500	58.1	Pass
8000	58.1	Pass
10000	58.2	Pass

**EN 61000-4-4  
Electrical Fast Transient/Burst**

**Test Summary (Pursuant to EN55103-2)**

Port Type:	D.C. Power Lines Signal Lines And Telecommunication Lines	A.C. Power Lines
Basic Standard:	EN 61000-4-4	
Required Performance Criterion:	B	
Limit:	±0.5kV	±1.0kV



**Test Results**

**EN 61000-4-4  
Electrical Fast Transient/Burst**

Level (Pursuant to EN55103-2)	Polarity	A.C. Power supply line and protective earth terminal	D.C. Power Lines, Signal Lines & Telecommunication Lines
0.5kV	+	N/A	OK
0.5kV	-	N/A	OK
1kV	+	OK	N/A
1kV	-	OK	N/A

- Meet criterion A - operate as intended during and after the test
- Meet criterion B - operate as intended after the test
- Meet criterion C - loss/error of function
- Additional Information
  - No observable change
  - EUT stopped operation and could / could not be reset by operator at \_\_\_ kV of Burst.
  - EUT was in abnormal operation:  
- operation mode was changed from \_\_\_ to \_\_\_ at \_\_\_ kV of Burst.
  - \_\_\_\_\_

**EN 61000-4-5  
Surge Immunity**

**Test Summary (Pursuant to EN55103-2)**

Port:	A.C. Power Lines		Signal and Telecommunication lines	D.C Power lines
A.C. Power Lines	Line to Line	Line to Earth	Line to Ground	
Limit:	5 Positive And 5 Negative Surges			
	1kV	2kV	1kV	0,5kV
Basic Standard:	EN 61000-4-5			
Required Performance Criterion:	B			

**Test Results**

**EN 61000-4-5  
Surge Immunity**

Level (Pursuant to EN55103-2)		Result
Between Phase And Phase:	1kV	N/A
Between Phase And Neutral:	1kV	OK
Between Phase And Earth:	2kV	OK
Between Neutral And Earth:	2kV	OK
Signal lines	1kV	N/A
Telecommunication Lines	1KV	N/A
D.C Power lines	0.5kV	N/A

- Meet criterion A - operate as intended during and after the test
- Meet criterion B - operate as intended after the test
- Meet criterion C - loss/error of function
- Additional Information
  - No observable change
  - EUT stopped operation and could / could not be reset by operator at \_\_\_ V of Surge.
  - EUT was in abnormal operation:  
- operation mode was changed from \_\_\_ to \_\_\_ at \_\_\_ V of Surge.
  - \_\_\_\_\_

**EN 61000-4-11  
Voltage Dips and Interruptions**

**Test Summary (Pursuant to EN55103-2)**

Port:	A.C. Power Lines			
Limit:	Test level in %U <sub>T</sub>	Duration (in period of the rated frequency)	No. of dips/interruptions	Required Performance Criterion:
	<5	1	3	B
	70	5	3	C
	<5	250	3	C
Basic Standard	EN 61000-4-11			

U<sub>T</sub> is the rated voltage for the equipment.

**Test Results**

**EN 61000-4-11  
Voltage Dips and Interruptions**

Test condition (Pursuant to EN55103-2)		Result
Test Level in %U <sub>T</sub>	Duration (in period of the rated frequency)	
<5	1	OK
70	5	OK
<5	250	OK

U<sub>T</sub> is the rated voltage for the equipment.

For <5% U<sub>T</sub> / 0,5 Duration Test item:

- Meet criterion A - operate as intended during and after the test
- Meet criterion B - operate as intended after the test
- Meet criterion C - loss/error of function

For other Test items:

- Meet criterion A - operate as intended during and after the test
- Meet criterion B - operate as intended after the test
- Meet criterion C - loss/error of function

Additional Information

- No observable change
- EUT stopped operation and could / could not be reset by operator at \_\_\_ %U<sub>T</sub> Test Level.
- EUT was in abnormal operation:  
- operation mode was changed from \_\_\_ to \_\_\_ at \_\_\_ %U<sub>T</sub> Test Level.

\_\_\_\_\_

**EN 61000-4-3  
Radiated Immunity**

**Test Summary (Pursuant to EN55103-2)**

Port:	Enclosure
Basic Standard:	EN 61000-4-3
Required Performance Criterion:	A
Limit:	3.0 V/m (r.m.s.)
Test Modulation:	1kHz, 80% AM
Frequency:	80 MHz to 1000 MHz
Antenna Polarization:	Horizontal and Vertical

**Note: The EUT was tested under manufacturer's declaration in the User's instructions for this item.**

**Test Results****EN 61000-4-3  
Radiated Immunity**

Frequency (MHz)	Exposed Side	Field Strength (V/m)	Result
80 to 1000	Front	3V/m (r.m.s.)	OK
80 to 1000	Left	3V/m (r.m.s.)	OK
80 to 1000	Rear	3V/m (r.m.s.)	OK
80 to 1000	Right	3V/m (r.m.s.)	OK

- Meet criterion A - operate as intended during and after the test
- Meet criterion B - operate as intended after the test
- Meet criterion C - loss/error of function
- Additional Information
  - No observable change
  - EUT stopped operation and could / could not be reset by operator.
  - EUT was in abnormal operation:  
- operation mode was changed from \_\_\_\_ to \_\_\_\_ at \_\_\_\_ V/m.
  - \_\_\_\_\_



## INTERTEK TESTING SERVICES

### TO OUR CLIENTS

### GUIDELINES FOR COMPLETING A DECLARATION OF CONFORMITY

There are many Directives and Standards in place, and you should assure yourself that the correct ones have been applied to your product.

The attached blank Declaration of Conformity complies with the format published in the Official Journal of the European Community. To complete the form:

1. List all applicable Directives, by number, on the top lines.  
  
e.g. 88/378/EEC for Toy Directive  
89/336/EEC for EMC Directive  
73/23/EEC for Low Voltage Directive  
93/68/EEC for CE Marking Directive
2. List the Standards under these Directives to which conformity is being declared. Intertek Testing Services test report(s) which you should retain to support your declaration contain this information.
3. Add manufacturer's and importer's name and address. The importer should be located within the EU.
4. Specify the type of equipment and model. You may list a block of serial numbers corresponding to the import quantity during the year of manufacture shown.
5. The Declaration of Conformity should be signed by the manufacturer or his authorized representative established within the EU.

#### NOTES:

- A. A COPY OF THE DECLARATION MUST ACCOMPANY IMPORT PAPERS INTO THE EC. ADDITIONAL COPIES MAY ALSO BE SUPPLIED IN EACH PRODUCT CARTON, WITH EACH PALLETIZED SHIPMENT, IN THE INSTRUCTION MANUAL OR ON THE WARRANTY CARD.
- B. THE IMPORTER OR THE MANUFACTURER'S AUTHORIZED REPRESENTATIVE MUST KEEP THE DECLARATION OF CONFORMITY AND THE TEST REPORTS AT THE DISPOSAL OF THE AUTHORITIES FOR A PERIOD OF TEN YEARS AFTER THE EQUIPMENT HAS BEEN PLACED ON THE MARKET.



**Declaration of Conformity**

Application of Council Directive(s):

\_\_\_\_\_

Standard(s) to which Conformity is Declared:

\_\_\_\_\_

Manufacturer's Name: .....

Manufacturer's Address: .....

.....

Import's Name: .....

Import's Address: .....

.....

Type of Equipment: .....

Model No.: .....

Serial No.: .....

Year of Manufacturer: .....

I the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Place: .....

\_\_\_\_\_  
(Signature)

Date: .....

\_\_\_\_\_  
(Full Name)

\_\_\_\_\_  
(Position)