

EMC VERIFICATION SUMMARY

	lectric hou		product	Others	GZ0511168	
Product Description:ALL ACCES Model: ASHDOWN Perfect TEN		MPLIFICA	TION Client: Ashdown Design&M Park Farm, Inworth, CO5 9SH, UK	arketing L Colchester	r, Essex	
Sample Receipt Date: 13 March 2			Tout Date: 12 March to 20 N	family 2006		
⊠ 1 st TEST			Test Date: 13 March to 20 M ALL TESTS WERE CONDUCTE		<u> </u>	
			ACCORDANCE WITH:	DIN		
☐ 2 nd TEST (after modification))		* EN 55103-1: 1996			
(* EN 55103-2: 1996			
			* EN 55103-1 (EN 61000-3-2): 19	06		
			* EN 55103-1 (EN 61000-3-3): 19			
			* EN 55103-2 (EN 61000-4-2): 19			
			* EN 55103-2 (EN 61000-4-3): 19			
			* EN 55103-2 (EN 61000-4-4): 1996			
			* EN 55103-2 (EN 61000-4-5): 199			
		* EN 55103-2 (EN 61000-4-6): 1996				
			* EN 55103-2 (EN 61000-4-11): 19			
Test Result	ok	not ok	Test Result	ok	not ok	
EN 55103-1: 1996	×		EN 61000-4-4: 1995+			
EN 55103-2: 1996	×		A1: 2001+A2: 2001	X		
EN 61000-3-2: 2000	X		EN 61000-4-6: 1996+A1: 2001	X		
EN 61000-3-3: 1995+A1: 2001	\boxtimes		EN 61000-4-5: 1995+A1: 2001	X		
EN 61000-4-2: 1995+A1: 1998+			EN 61000-4-11: 1994+A1: 2001	X		
A2: 2001	X		EN 61000-4-3: 2002+A1: 2002	X		
Tested By:			Approved By:			
Sam Dong – Engineer	ignature		Tendge Huang - Proje		ature	
0 0			renuge Huung – Proje	u ngin	eer	

1 of 30

11 April 2006

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.

This report shall not be reproduced except in full without prior authorization from Intertek Testing Services Hong Kong Limited.



EMC Results Conclusion (with Justification)

RE: EMC Testing Pursuant to EMC Directive 89/336/EEC Performed On the ALL ACCESS BASS

AMPLIFICATION, Model: Perfect TEN.

We tested the ALL ACCESS BASS AMPLIFICATION, Model Perfect TEN, 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 61000-4-11) 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
- This report shall not be reproduced except in full without prior authorization from Intertek Testing Services Hong Kong Limited.

2 of 30



LABORATORY MEASUREMENTS

Configuration

Equipment Under Test (EUT): ALL ACCESS BASS AMPLIFICATION

Model: Perfect TEN

Serial No. Not supplied by the client

Support Equipment: N/A

Power Source: 220VAC, 50/60Hz;

230VAC, 50/60Hz;

240VAC, 50/60Hz, 60W

Ctrl. No.: 1.3



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	
(IVII IZ)	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

Ctrl. No.: 2.2.4



N 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

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%.

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	Voltage(mV)	Test Result	Limit (A/m)	Side
(Hz)		H(A/m)		
10000	0.015	0.001	0.010	В
45000	0.027	0.001	0.010	В
50	0.005	0.025	1.000	Т
48000	0.024	0.001	0.010	Т
50	0.005	0.025	1.000	F
48000	0.021	0.001	0.010	F
50	0.005	0.025	1.000	L
48000	0.020	0.001	0.010	L
50	0.005	0.025	1.000	R
48000	0.020	0.001	0.010	R
10000	0.035	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: ± 1.8 dB at a level of confidence of 95%.

Ctrl. No.: 2.2.6



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

Frequency	Quasi	-Peak	Average	
(MHz)	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

del No.: After eight				
Frequency	Quasi	i-Peak	Ave	erage
(MHz)	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 (dBμV/m)	Limit at 3m (dBµV/m)	Margin (dB)
Н	30.00	<30	40	<-10.0
Н	80.00	<30	40	<-10.0
Н	500.00	<35	47	<-12.0
Н	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:

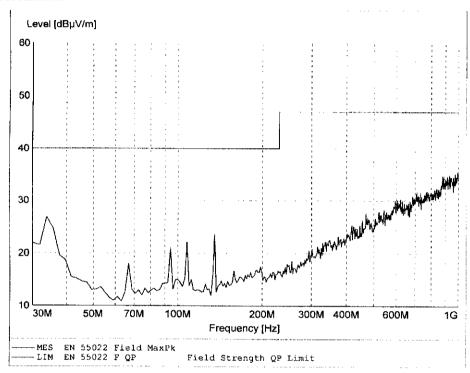
- 1. Quasi-Peak Detector Data.
- 2. Negative sign (-) in the margin column signify levels below the limit.
- 3. Frequency range scanned: 30 MHz to 1000 MHz.
- 4. Only emissions significantly above equipment noise floor are reported.
- 5. Uncertainty: ± 4.2 dB at a level of confidence of 95%.

Ctrl. No.: 2.3

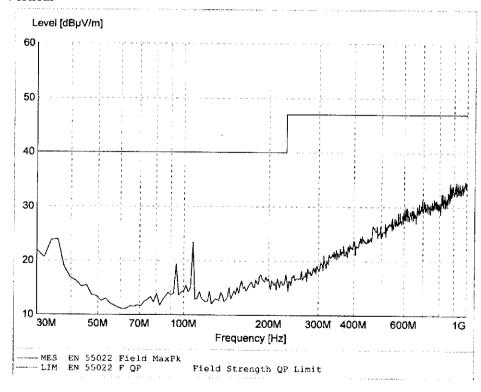
Intertek ETL SEMKO

Report No.: JGZ0511168-1

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.

Ctrl. No.: 5.1



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

EUT: 100W-2

Test category: Class-A per Ed. 2.1 (European limits)

Test date: 2006-3-8

Start time: 16:17:50

Tested by: GWB

Test Margin: 100 End time: 16:20:30

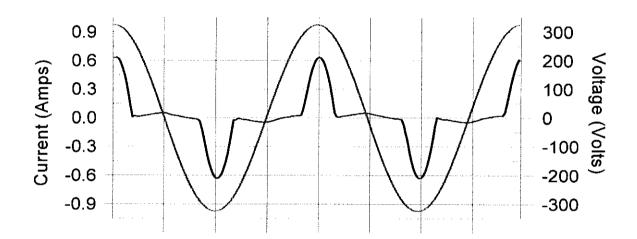
Test duration (min): 2.5

Data file name: H-000259.cts data

Test Result: Pass

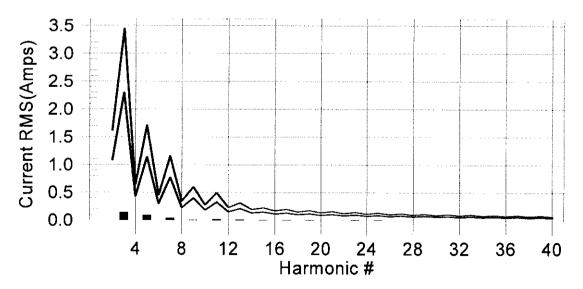
Source qualification: Normal

Current & voltage waveforms



Harmonics and Class A limit line

European Limits



Test result: Pass Worst harmonic was #5 with 5.41% of the limit.



Current Test Result Summary (Run time)

EUT: 100W-2

Test category: Class-A per Ed. 2.1 (European limits)

Tested by: GWB

Test date: 2006-3-8

Start time: 16:17:50

Test Margin: 100 End time: 16:20:30

Test duration (min): 2.5

Data file name: H-000259.cts_data

Test Result: Pass

Source qualification: Normal

THC(A): 0.17 I-THD(pk%): 89.87 Highest parameter values during test: POHC(A): 0.004 POHC Limit(A): 0.251

V_RMS (Volts): I_Peak (Amps): I_Fund (Amps): 229.70 0.694

Frequency(Hz): 50.00 I_RMS (Amps): 0.262 Crest Factor: 2.651

0.195 Power (Watts): 44.3

Power Factor: 0.740

	rower (watts):	44.3		rower ractor:	0.740		
Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.001	1.080	0.1	0.001	1.620	0.09	Pass
3	0.140	2.300	6.1	0.142	3.450	4.13	Pass
4	0.001	0.430	0.2	0.001	0.645	0.15	Pass
5	0.091	1.140	8.0	0.092	1.710	5.41	Pass
6	0.000	0.300	0.2	0.001	0.450	0.15	Pass
7	0.036	0.770	4.7	0.037	1.155	3.16	Pass
8	0.000	0.230	0.1	0.000	0.345	0.08	Pass
9	0.003	0.400	0.7	0.003	0.600	0.49	Pass
10	0.000	0.184	0.1	0.000	0.276	0.06	Pass
11	0.013	0.330	4.0	0.013	0.495	2.69	Pass
12	0.000	0.153	0.1	0.000	0.230	0.11	Pass
13	0.010	0.210	4.6	0.010	0.315	3.14	Pass
14	0.000	0.131	0.1	0.000	0.197	0.11	Pass
15	0.002	0.150	1.4	0.002	0.225	0.96	Pass
16	0.000	0.115	0.1	0.000	0.173	0.08	Pass
17	0.005	0.132	3.6	0.005	0.199	2.42	Pass
18	0.000	0.102	0.1	0.000	0.153	0.12	Pass
19	0.004	0.118	3.5	0.004	0.178	2.36	Pass
20	0.000	0.092	0.2	0.000	0.138	0.14	Pass
21	0.001	0.107	1.2	0.001	0.161	0.86	Pass
22	0.000	0.084	0.1	0.000	0.125	0.13	Pass
23	0.002	0.098	2.5	0.002	0.147	1.70	Pass
24	0.000	0.077	0.1	0.000	0.115	0.10	Pass
25	0.002	0.090	2.4	0.002	0.135	1.65	Pass
26	0.000	0.071	0.1	0.000	0.106	0.08	Pass
27	0.001	0.083	1.1	0.001	0.125	0.73	Pass
28	0.000	0.066	0.1	0.000	0.099	0.10	Pass
29	0.002	0.078	1.9	0.002	0.116	1.34	Pass
30	0.000	0.061	0.1	0.000	0.092	0.09	Pass
31	0.001	0.073	1.8	0.001	0.109	1.24	Pass
32	0.000	0.058	0.1	0.000	0.086	0.11	Pass
33	0.001	0.068	1.0	0.001	0.102	0.69	Pass
34	0.000	0.054	0.1	0.000	0.081	0.08	Pass
35	0.001	0.064	1.7	0.001	0.096	1.14	Pass
36	0.000	0.051	0.1	0.000	0.077	0.09	Pass
37	0.001	0.061	1.5	0.001	0.091	1.04	Pass
38	0.000	0.048	0.1	0.000	0.073	0.10	Pass
39	0.001	0.058	0.9	0.001	0.087	0.66	Pass
40	0.000	0.046	0.1	0.000	0.069	0.11	Pass



Voltage Source Verification Data (Run time)

EUT: 100W-2

Test category: Class-A per Ed. 2.1 (European limits)

Test date: 2006-3-8

Start time: 16:17:50

Test Margin: 100 End time: 16:20:30

Tested by: GWB

Test duration (min): 2.5

Data file name: H-000259.cts data

Test Result: Pass

Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms): 229.70 I_Peak (Amps): 0.694 [Fund (Amps): 0.195 Power (Watts): 44.3

Frequency(Hz): 50.00 I_RMS (Amps): 0.262 Crest Factor: 2.651 **Power Factor:** 0.740

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.156	0.459	33.98	ОК
3	0.605	2.067	29.27	OK
4	0.069	0.459	14.95	OK
	0.051	0.919	5.60	OK
5 6	0.053	0.459	11.53	OK
7	0.024	0.689	3.43	OK
8	0.028	0.459	6.03	OK
9	0.029	0.459	6.26	OK
10	0.032	0.459	7.03	OK
11	0.028	0.230	12.19	OK
12	0.022	0.230	9.49	OK
13	0.023	0.230	10.02	OK
14	0.026	0.230	11.39	OK
15	0.024	0.230	10.36	OK
16	0.029	0.230	12.60	OK
17	0.029	0.230	12.66	OK
18	0.028	0.230	12.21	OK
19	0.016	0.230	6.86	OK
20	0.027	. 0.230	11.84	OK
21	0.018	0.230	7,77	OK
22	0.020	0.230	8.54	OK
23	0.017	0.230	7.22	OK
24	0.014	0.230	6.17	OK
25	0.014	0.230	6.29	OK
26	0.016	0.230	7.02	OK
27	0.015	0.230	6.48	OK
28	0.014	0.230	6.05	OK
29	0.015	0.230	6.61	OK
30	0.012	0.230	5.30	OK
31	0.010	0.230	4.35	OK
32	0.011	0.230	4.96	OK
33	0.011	0.230	4.80	ОК
34	0.009	0.230	3.96	OK
35	0.011	0.230	4.85	ок
36	0.009	0.230	4.00	OK
37	0.009	0.230	3.77	OK
38	0.008	0.230	3.63	OK
39	0.008	0.230	3.34	OK
40	0.011	0.230	4.67	ок



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.

Ctrl. No.: 5.2



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

Tested by: GWB Test Margin: 100

End time: 16:32:11

EUT: 100W-2

Test category: dt,dmax,dc and Pst (European limits)

Test date: 2006-3-8 Test duration (min): 10 Start time: 16:21:33

Data file name: F-000260.cts data

Test Result: Pass

Status: Test Aborted

Pst _i and limit line			Europea	an Limits	
Time is too short for Pst and Plt plo	Time is too short for Pst and Plt plots				
Parameter values recorded during	the test:				
Vrms at the end of test (Volt):	229.52				
Highest dt (%):	-0.51	Test limit (%):	3.30	Pass	
Time(mS) > dt:	0.0	Test limit (mŚ):	500.0	Pass	
Highest dc (%):	0.00	Test limit (%):	3.30	Pass	
Highest dmax (%):	-0.50	Test limit (%):	4.00	Pass	
Highest Pst (10 min. period):	0.000	Test limit:	1.000	Pass	



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:	В
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

Ctrl. No.: 7.1



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

Ctrl. No.: 7.1



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 No. of (kV) 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

Ctrl. No.: 7.1



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 Line and Telecommunication Line	
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.

Ctrl. No.: 8.1.1



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

X	Me	et criterion A - operate as intended during and after the test	
	Me	et criterion B - operate as intended after the test	
	Meet criterion C - loss/error of function		
X	Ad	ditional Information	
	X	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.	

Ctrl. No.: 8.1.1



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		
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: 69.3 Environment: E3

Frequency (Hz)	S/N	Result
50	69.3	Pass
100	68.5	Pass
200	68.8	Pass
400	68.7	Pass
800	67.3	Pass
1600	67.1	Pass
3200	65.1	Pass
5000	68.8	Pass
6500	68.5	Pass
8000	68.1	Pass
10000	68.2	Pass
10000	08.2	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:	В	
Limit:	±0.5kV	±1.0kV

Ctrl. No.: 9.1



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

	Me	et criterion A - operate as intended during and after the test
X	Me	et criterion B - operate as intended after the test
	Me	et criterion C - loss/error of function
X	Ad	ditional Information
	X	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.

Ctrl. No.: 9.1



EN 61000-4-5 Surge Immunity

Test Summary (Pursuant to EN55103-2)

Port:			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:	В				

Ctrl. No.: 10.1



Test Results

EN 61000-4-5 Surge Immunity

Level (Pursuant to EN5510	03-2)	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		
X	Meet criterion B - operate as intended after the test		
	Meet criterion C - loss/error of function		
X	Additional Information		
	No observable change		
	☐ EUT stopped operation and could / could not be reset by operator at V of Sur	ge.	
	☐ EUT was in abnormal operation: - operation mode was changed from to at V of Surge.		

Ctrl. No.: 10.1



EN 61000-4-11 Voltage Dips and Interruptions

Test Summary (Pursuant to EN55103-2)

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

 U_T is the rated voltage for the equipment.

Ctrl. No.: 11.1



Test Results

EN 61000-4-11 Voltage Dips and Interruptions

Test condition (Pt	ursuant to EN55103-2)	Result
Test Level in %U _T	Duration (in period of the rated frequency)	
<5	1	OK
70	5	OK
<5	250	OK

U_T is the rated voltage for the equipment

O j is t	ic rated von	lage for the equipm	ent.			
_	■ Meet cr ■ Meet cr	Duration Test item iterion A - operate iterion B - operate iterion C - loss/erro	as intended duri as intended after	ng and after the the test	he test	
	Meet cri	is: iterion A - operate iterion B - operate iterion C - loss/erro	as intended after	ng and after the the test	ne test	
X A	Additional Ir	ıformation				
	EUT stoll EUT wa	ervable change opped operation and is in abnormal operation mode was chan	ation:			

Ctrl. No.: 11.1



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.

Ctrl. No.: 12.1



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

X	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	
X	Additional Information	
	X	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.

Ctrl. No.: 12.1



INTERTEK TESTING SERVICES

TO OUR CLIENTS

GUIDELINES FOR COMPLETING A DECLARATION OF CONFORMITY

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

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 <u>all</u> 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 <u>Standards</u> 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 <u>block</u> 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 C	onformity 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 Directive(s) and Standard(s).	ipment specified above conforms to the above			
Place:				
	(Signature)			
Date:	(Full Name)			
	(Position)			