

EMC TEST REPORT
For
Ningbo DSW International Co., Ltd.
Piezo Alarm (Call Point)
Model No.: EFA-183
Additional Model No.: EPA-140, EFA-126, F-87

Prepared for : Ningbo DSW International Co., Ltd.
Address : Rm1301-1302, Building No.5, Oriental Commercial Center, Xingning Road, Ningbo City, 315041, China

Prepared by : Shenzhen LCS Compliance Testing Laboratory Ltd.
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Date of receipt of test sample : August 02, 2013
Number of tested samples : 1
Serial number : Prototype
Date of Test : August 02, 2013 - August 07, 2013
Date of Report : August 07, 2013



EMC TEST REPORT**EN 50130-4: 2011**

Immunity requirements for components of fire, intruder, hold up, CCTV, access control and social alarm systems

Report Reference No. : **LCS130802068TE**

Date Of Issue..... : August 07, 2013

Testing Laboratory Name..... : **Shenzhen LCS Compliance Testing Laboratory Ltd.**

Address..... : 1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China

Testing Location/ Procedure : Full application of Harmonised standards
 Partial application of Harmonised standards
 Other standard testing method

Applicant's Name : **Ningbo DSW International Co., Ltd.**

Address..... : Rm1301-1302, Building No.5, Oriental Commercial Center, Xingning Road, Ningbo City, 315041, China

Test Specification

Standard : EN 61000-6-3: 2007+A1: 2011
 EN 50130-4: 2011

Test Report Form No...... : LCSEMC-1.0

TRF Originator..... : Shenzhen LCS Compliance Testing Laboratory Ltd.

Master TRF : Dated 2011-03

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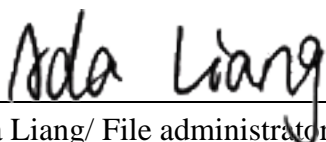
Test Item Description..... : **Piezo Alarm (Call Point)**

Trade Mark..... : DSW BLUNET

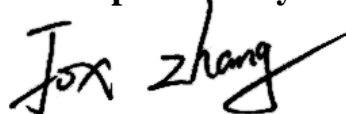
Model/Type Reference..... : EFA-183

Ratings : DC 24V

Result : **Positive**

Compiled by:


Ada Liang/ File administrators

Supervised by:


Fox Zhang/ Technique principal

Approved by:


Gavin Liang/ Manager

EMC -- TEST REPORT**Test Report No. : LCS130802068TE**August 07, 2013
Date of issue

Type / Model..... : EFA-183

EUT..... : Piezo Alarm (Call Point)

Applicant..... : Ningbo DSW International Co., Ltd.Address..... : Rm1301-1302, Building No.5, Oriental Commercial Center,
Xingning Road, Ningbo City, 315041, China

Telephone..... : /

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Manufacturer..... : Ningbo DSW International Co., Ltd.**(Ningbo DSW Industry Co., Ltd.)**Address..... : Rm1301-1302, Building No.5, Oriental Commercial Center,
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Telephone..... : /

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Factory..... : Ningbo DSW International Co., Ltd.**(Ningbo DSW Industry Co., Ltd.)**Address..... : Rm1301-1302, Building No.5, Oriental Commercial Center,
Xingning Road, Ningbo City, 315041, China
(No.199 Xizhihe Road, Beilun District, Ningbo City, China)

Telephone..... : /

Fax..... : /

Test Result according to the standards on page 5: **Positive**

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

TABLE OF CONTENT

Test Report Description	Page
1. SUMMARY OF STANDARDS AND RESULTS	5
1.1. Description of Standards and Results.....	5
1.2. Description of Performance Criteria	6
2. GENERAL INFORMATION	7
2.1. Description of Device (EUT)	7
2.2. Description of Test Facility	7
2.3. Statement of the measurement uncertainty.....	7
2.4. Measurement Uncertainty	8
3. MEASURING DEVICE AND TEST EQUIPMENT	9
3.1. Conducted Disturbance	9
3.2. Disturbance Power	9
3.3. Radiated Electromagnetic Disturbance	9
3.4. Radiated Disturbance (Electric Field)	9
3.5. Harmonic Current.....	9
3.6. Voltage fluctuation and Flicker	9
3.7. Electrostatic Discharge.....	10
3.8. RF Field Strength Susceptibility	10
3.9. Electrical Fast Transient/Burst	10
3.10. Surge	10
3.11. Conducted Susceptibility.....	10
3.12. Power Frequency Magnetic Field Susceptibility.....	10
3.13. Voltage Dips	11
3.14. Voltage Short Interruptions	11
4. RADIATED EMISSION MEASUREMENT	12
4.1. Block Diagram of Test Setup	12
4.2. Test Standard	12
4.3. Radiated Emission Limits	12
4.4. EUT Configuration on Test	13
4.5. Operating Condition of EUT	13
4.6. Test Procedure	13
4.7. Test Results	13
5. ELECTROSTATIC DISCHARGE IMMUNITY TEST	15
5.1. Block Diagram of Test Setup	15
5.2. Test Standard	15
5.3. Severity Levels and Performance Criterion	15
5.4. EUT Configuration on Test	15
5.5. Operating Condition of EUT	15
5.6. Test Procedure	16
5.7. Test Results	16
6. RF FIELD STRENGTH SUSCEPTIBILITY TEST	18
6.1. Block Diagram of Test	18
6.2. Test Standard	18
6.3. Severity Levels and Performance Criterion	18
6.4. EUT Configuration on Test	19
6.5. Operating Condition of EUT	19
6.6. Test Procedure	19
6.7. Test Results	19
7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT	21
8. MANUFACTURER/ APPROVAL HOLDER DECLARATION	24

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION (EN 61000-6-3: 2007+A1: 2011)			
Description of Test Item	Standard	Limits	Results
Conducted disturbance at mains terminals	EN 55022: 2010	Class B	N/A
Conducted disturbance at telecommunication port	EN 55022: 2010	Class B	N/A
Radiated disturbance	EN 55022: 2010	Class B	PASS
Harmonic current emissions	EN 61000-3-2: 2006+A1: 2009+A2: 2009	Class A	N/A
Voltage fluctuations & flicker	EN 61000-3-3: 2008	-----	N/A
IMMUNITY (EN 50130-4: 2011)			
Description of Test Item	Basic Standard	Performance Criteria	Results
Electrostatic discharge (ESD)	EN 61000-4-2: 2009	B	PASS
Radio-frequency, Continuous radiated disturbance	EN 61000-4-3: 2006+A1: 2008	A	PASS
Electrical fast transient (EFT)	EN 61000-4-4: 2004+A1: 2010	B	N/A
Surge (Input a.c. power ports)	EN 61000-4-5: 2006	B	N/A
Surge (Telecommunication ports)		B	N/A
Radio-frequency, Continuous conducted disturbance	EN 61000-4-6: 2009	A	N/A
Power frequency magnetic field	EN 61000-4-8: 2010	A	N/A
Voltage dips, >95% reduction	EN 61000-4-11: 2004	B	N/A
Voltage dips, 30% reduction		B	N/A
Voltage interruptions		C	N/A
N/A is an abbreviation for Not Applicable.			

1.2. Description of Performance Criteria

General Performance Criteria

Examples of functions defined by the manufacturer to be evaluated during testing include, but are not limited to, the following:

- essential operational modes and states;
- tests of all peripheral access (hard disks, floppy disks, printers, keyboard, mouse, etc.);
- quality of software execution;
- quality of data display and transmission;
- quality of speech transmission.

1.2.1. Performance criterion A

The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacture when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

1.2.2. Performance 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 manufacture, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.

During the test, degradation of performance is allowed. However, no change of operation state or stored data is allowed to persist after the test.

If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

1.2.3. Performance 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 manufacture's instructions.

Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT	: Piezo Alarm (Call Point)
Model Number	: EFA-183
Power Supply	: DC 24V

2.2. Description of Test Facility

Site Description

EMC Lab.	: Accredited by CNAS, June 04, 2010 The Certificate Registration Number. is L4595. Accredited by FCC, July 14, 2011 The Certificate Registration Number. is 899208. Accredited by Industry Canada, May. 02, 2011 The Certificate Registration Number. is 9642A-1 Accredited by VCCI, Japan January 30, 2012 The Certificate Registration Number. is C-4260 and R-3804 Accredited by ESMD, April 24, 2012 The Certificate Registration Number. is ARCB0108. Accredited by UL, June 11, 2012 The Certificate Registration Number. is 100571-492. Accredited by TUV, November 21, 2012 The Certificate Registration Number. is SCN1081 Accredited by Intertek, December 21, 2012 The Certificate Registration Number. is 2011-RTL-L1-50.
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2.3. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

2.4.Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Radiation Uncertainty :	30MHz~200MHz	$\pm 2.96\text{dB}$	(1)
	200MHz~1000MHz	$\pm 3.10\text{dB}$	(1)
Conduction Uncertainty :	150kHz~30MHz	$\pm 1.63\text{dB}$	(1)
Power disturbance :	30MHz~300MHz	$\pm 1.60\text{dB}$	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3. MEASURING DEVICE AND TEST EQUIPMENT

3.1. Conducted Disturbance

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	101142	2013/06/18
2	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	101840	2013/06/18
3	Artificial Mains	ROHDE & SCHWARZ	ENV216	101288	2013/06/18
4	EMI Test Software	AUDIX	E3	N/A	2013/06/18

3.2. Disturbance Power

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	101142	2013/06/18
2	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	101840	2013/06/18
3	Absorbing clamp	ROHDE & SCHWARZ	MDS 21	4033	2013/06/19
4	EMI Test Software	AUDIX	E3	N/A	2013/06/18

3.3. Radiated Electromagnetic Disturbance

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	101142	2013/06/18
2	Triple-loop Antenna	EVERFINE	LLA-2	11050003	2013/06/18
3	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	101840	2013/06/18
4	EMI Test Software	AUDIX	E3	N/A	2013/06/18

3.4. Radiated Disturbance (Electric Field)

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	101142	2013/06/18
2	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	101840	2013/06/18
3	Log per Antenna	SCHWARZBECK	VULB9163	9163-470	2013/06/21
4	Amplifier	Compliance Direction	PAP-0102	21001	2013/06/18
5	Spectrum Analyzer	Agilent	E4407B	MY41440754	2013/07/16
6	Horn Antenna	ETS.LINDGREN	3115	00034771	2012/12/11
7	EMI Test Software	AUDIX	E3	N/A	2013/06/18

3.5. Harmonic Current

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Power Analyzer Test System	Voltech	PM6000	20000670053	2013/06/18

3.6. Voltage fluctuation and Flicker

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Power Analyzer Test System	Voltech	PM6000	20000670053	2013/06/18

3.7. Electrostatic Discharge

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ESD Simulator	KIKUSUI	KC001311	KES4021	2013/06/19

3.8. RF Field Strength Susceptibility

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	SIGNAL GENERATOR	HP	8648A	625U00573	2013/06/17
2	Amplifier	AR	500A100	17034	2013/06/18
3	Amplifier	AR	100W/1000M1	17028	2013/06/18
4	Isotropic Field Monitor	AR	FM2000	16829	2013/06/18
5	Isotropic Field Probe	AR	FP2000	16755	2013/06/18
6	Bi-conic Antenna	EMCO	3108	9507-2534	2013/06/19
7	By-log-periodic Antenna	AR	AT1080	16812	2013/06/19
8	EMS Test Software	ROHDE & SCHWARZ	ESK1	N/A	2013/06/19

3.9. Electrical Fast Transient/Burst

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Electrical fast transient(EFT)generator	3CTEST	EFT-4021	EC0461044	2013/06/18
2	Coupling Clamp	3CTEST	EFTC	EC0441098	2013/06/18

3.10. Surge

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Surge test system	3CTEST	SG-5006G	EC5581070	2013/06/18
2	Coupling/decoupling network	3CTEST	SGN-5010G	ECS5591033	2013/06/18

3.11. Conducted Susceptibility

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Conducted Immunity Test System	FRANKONIA	CIT-10	126A1195	2013/06/18
2	Coupling/decoupling network	FRANKONIA	CDN-M2+M3	A2210177	2013/06/18

3.12. Power Frequency Magnetic Field Susceptibility

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Power frequency mag-field generator System	EVERFINE	EMS61000-8K	906003	2013/06/18

3.13. Voltage Dips

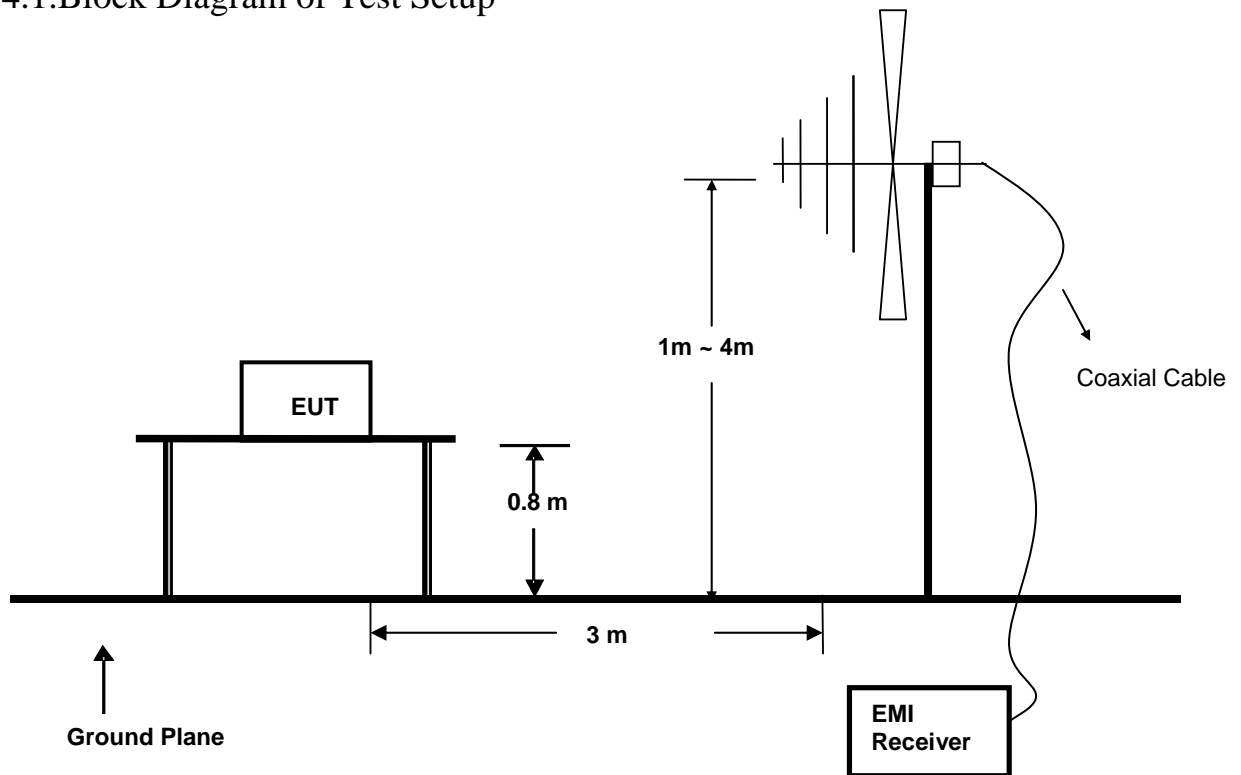
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Voltage dips and up generator	3CTEST	VDG-1105G	EC0171014	2013/06/18

3.14. Voltage Short Interruptions

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Voltage dips and up generator	3CTEST	VDG-1105G	EC0171014	2013/06/18

4. RADIATED EMISSION MEASUREMENT

4.1. Block Diagram of Test Setup



4.2. Test Standard

EN 61000-6-3: 2007+A1: 2011 (EN 55022: 2010)

4.3. Radiated Emission Limits

EN 55022 Limits:

All emanations from a class B device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMIT (dB μ V/m)
30 ~ 230	3	40
230 ~ 1000	3	47

Note: (1) The smaller limit shall apply at the combination point between two frequency bands.

(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT.

4.4.EUT Configuration on Test

The EN 55022 regulations test method must be used to find the maximum emission during radiated emission measurement.

4.5.Operating Condition of EUT

4.5.1.Turn on the power.

4.5.2.After that, let the EUT work in test mode (ON) and measure it.

4.6.Test Procedure

The EUT is placed on a turntable, which is 0.8 meter high above the ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. By-log antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

The bandwidth of the Receiver is set at 120kHz.

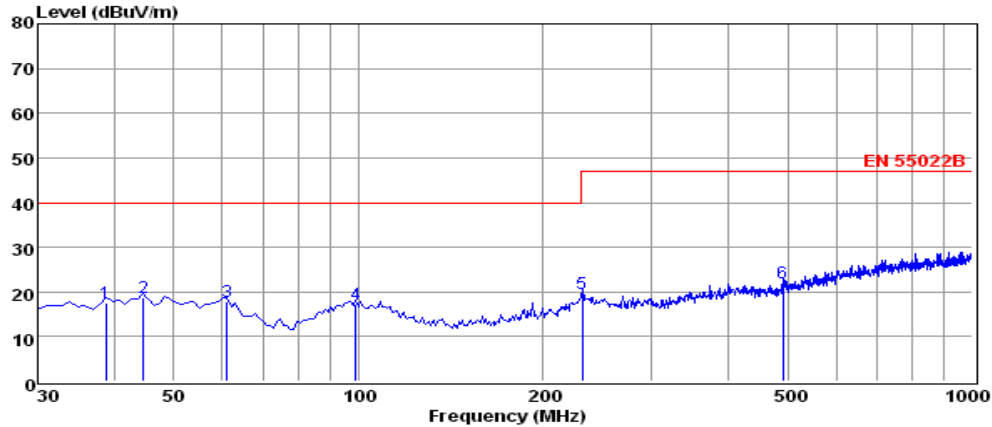
The frequency range from 30MHz to 1000MHz is investigated.

4.7.Test Results

PASS.

The test result please refer to the following pages.

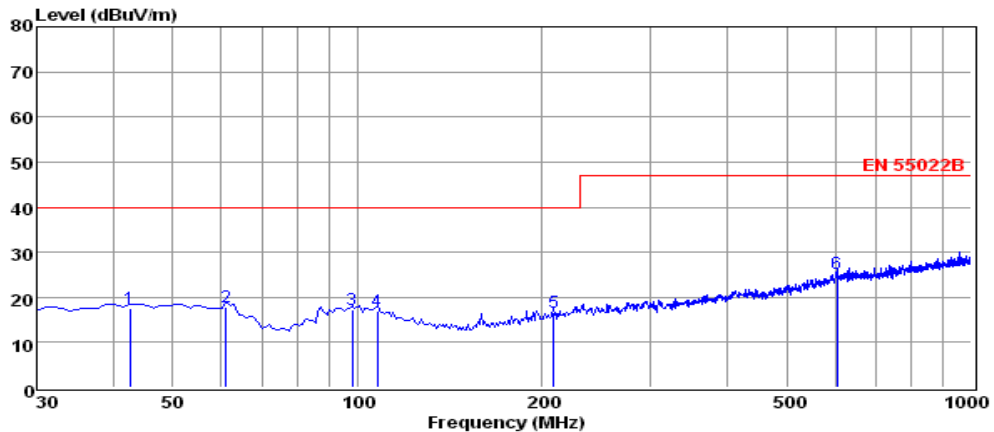
Model No.	EFA-183	Test Date	August 05, 2013
Environmental Conditions	24°C, 56% RH	Test Mode	ON
Pol	Vertical	Detector Function	Quasi-peak
Test Engineer	Kano	Distance	3m



Freq	Reading	CabLos	Antfac	Measured	Linit	Over	Remark
MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
38.73	4.04	0.38	13.25	17.67	40.00	-22.33	QP
44.55	4.64	0.41	13.55	18.60	40.00	-21.40	QP
61.04	4.99	0.49	12.28	17.76	40.00	-22.24	QP
98.87	3.46	0.61	13.09	17.16	40.00	-22.84	QP
231.76	7.01	0.98	11.72	19.71	47.00	-27.29	QP
490.75	4.38	1.32	16.34	22.04	47.00	-24.96	QP

Note: 1. All readings are Quasi-peak values.
 2. Measured= Reading + Antenna Factor + Cable Loss
 3. The emission that ate 20db blow the official limit are not reported

Model No.	EFA-183	Test Date	August 05, 2013
Environmental Conditions	24°C, 56% RH	Test Mode	ON
Pol	Horizontal	Detector Function	Quasi-peak
Test Engineer	Kano	Distance	3m

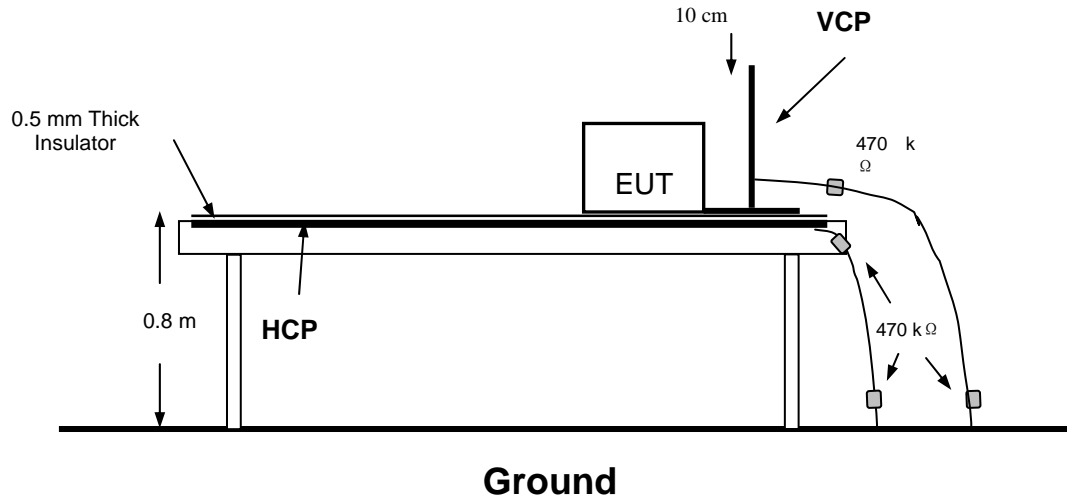


Freq	Reading	CabLos	Antfac	Measured	Linit	Over	Remark
MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
42.61	3.52	0.50	13.56	17.58	40.00	-22.42	QP
61.04	5.18	0.49	12.28	17.95	40.00	-22.05	QP
97.90	3.55	0.61	13.03	17.19	40.00	-22.81	QP
107.60	3.85	0.68	12.47	17.00	40.00	-23.00	QP
208.48	4.89	0.86	10.84	16.59	40.00	-23.41	QP
604.24	5.31	1.55	18.47	25.33	47.00	-21.67	QP

Note: 1. All readings are Quasi-peak values.
 2. Measured= Reading + Antenna Factor + Cable Loss
 3. The emission that ate 20db blow the official limit are not reported

5. ELECTROSTATIC DISCHARGE IMMUNITY TEST

5.1. Block Diagram of Test Setup



5.2. Test Standard

EN 50130-4: 2011 (EN 61000-4-2: 2009)

Severity Level: 3 / Air Discharge: $\pm 8\text{KV}$, Level: 3 / Contact Discharge: $\pm 6\text{KV}$

5.3. Severity Levels and Performance Criterion

5.3.1. Severity level

Level	Test Voltage Contact Discharge (KV)	Test Voltage Air Discharge (KV)
1.	± 2	± 2
2.	± 4	± 4
3.	± 6	± 8
4.	± 8	± 15
X	Special	Special

5.3.2. Performance Criterion: **B**

5.4. EUT Configuration on Test

The configuration of EUT is listed in Section 3.7.

5.5. Operating Condition of EUT

5.5.1. Setup the EUT as shown on Section 5.1.

5.5.2. Turn on the power of all equipments.

5.5.3. Let the EUT work in measuring mode (ON) and measure it.

5.6. Test Procedure

5.6.1. Air Discharge

This test is done on a non-conductive surface. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT.

After each discharge, the discharge electrode shall be removed from the EUT.

The generator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed

5.6.2. Contact Discharge

All the procedure shall be same as Section 5.6.1. Except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

5.6.3. Indirect Discharge For Horizontal Coupling Plane

At least 10 single discharges (in the most sensitive polarity) shall be applied at the front edge of each HCP opposite the center point of each unit (if applicable) of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

5.6.4. Indirect Discharge For Vertical Coupling Plane

At least 10 single discharge (in the most sensitive polarity) shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT.

Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

5.7. Test Results

PASS.

Please refer to the following pages

Electrostatic Discharger Test Results

Standard	<input type="checkbox"/> IEC 61000-4-2 <input checked="" type="checkbox"/> EN 61000-4-2		
Applicant	Ningbo DSW International Co., Ltd.		
EUT	Piezo Alarm (Call Point)	Temperature	24°C
M/N	EFA-183	Humidity	53%
Criterion	B	Pressure	1021mbar
Test Mode	ON	Test Date	August 05, 2013
Test Engineer	Kano		

Air Discharge						
Test Points	Test Levels			Results		
	± 2KV	± 4KV	± 8KV	Passed	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Top	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Bottom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

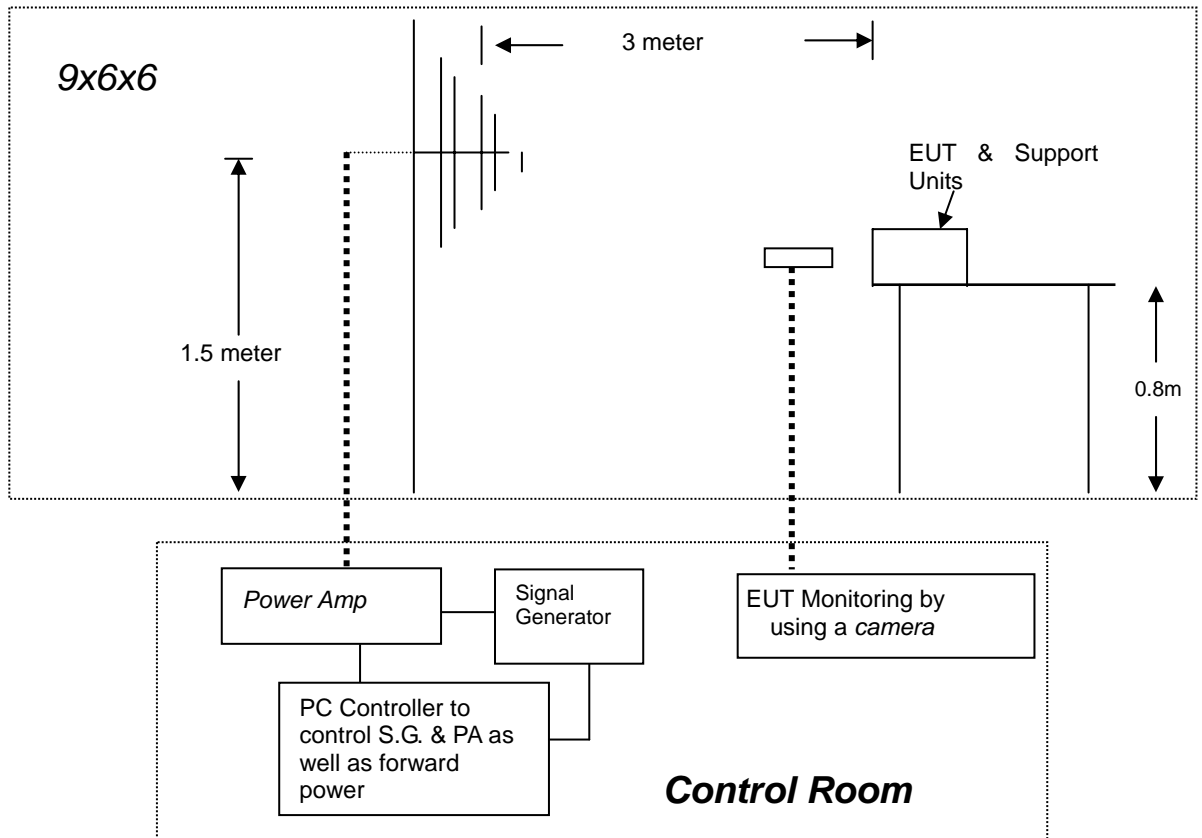
Contact Discharge					
Test Points	Test Levels		Results		
	± 2 kV	±6 kV	Passed	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Top	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Bottom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

Discharge To Horizontal Coupling Plane					
Side of EUT	Test Levels		Results		
	± 6 kV	± 8kV	Passed	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

Discharge To Vertical Coupling Plane					
Side of EUT	Test Levels		Results		
	± 6 kV	± 8 kV	Passed	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

6. RF FIELD STRENGTH SUSCEPTIBILITY TEST

6.1. Block Diagram of Test



6.2. Test Standard

EN 50130-4: 2011 (EN 61000-4-3: 2006+A1: 2008)
 Severity Level: 3, 10V / m

6.3. Severity Levels and Performance Criterion

6.3.1. Severity Levels

Level	Field Strength V/m
1.	1
2.	3
3.	10
X.	Special

6.3.2. Performance Criterion: A

6.4.EUT Configuration on Test

The configuration of the EUT is same as Section 3.8.

6.5.Operating Condition of EUT

6.5.1.Setup the EUT as shown on Section 6.1.

6.5.2.Turn on the power of all equipments.

6.5.3.Let the EUT work in measuring mode (ON) and measure it.

6.6.Test Procedure

The EUT are placed on a table, which is 0.8 meter high above the ground. The EUT is set 3 meters away from the transmitting antenna, which is mounted on an antenna tower. Both horizontal and vertical polarization of the antenna is set on test. Each of the four sides of the EUT must be faced this transmitting antenna and measured individually. In order to judge the EUT performance, a CCD Recording is used to monitor its screen. All the scanning conditions are as following:

Condition of Test	Remark
1. Fielded Strength	10V/m (Severity Level 2)
2. Radiated Signal	Unmodulated
3. Scanning Frequency	80 - 1000 MHz, 1.4GHz-2.7GHz
4. Sweep time of radiated	0.0015 Decade/s
5. Dwell Time	3 Sec.

6.7.Test Results

PASS.

Please refer to the following page.

RF Field Strength Susceptibility Test Results

Standard	<input type="checkbox"/> IEC 61000-4-3 <input checked="" type="checkbox"/> EN 61000-4-3		
Applicant	Ningbo DSW International Co., Ltd.		
EUT	Piezo Alarm (Call Point)	Temperature	24°C
M/N	EFA-183	Humidity	53%
Field Strength	10 V/m	Criterion	A
Test Mode	ON	Test Engineer	Kano
Frequency Range	80 MHz to 1000 MHz 1.4GHz-2.7GHz	Test Date	August 05, 2013
Modulation	<input type="checkbox"/> None <input type="checkbox"/> Pulse <input checked="" type="checkbox"/> AM 1KHz 80%		
Steps	1%		

	Horizontal	Vertical
Front	PASS	PASS
Right	PASS	PASS
Rear	PASS	PASS
Left	PASS	PASS

Test Equipment:

1. Signal Generator: 2031 (MARCONI)
2. Power Amplifier: 500A100 & 100W/1000M1 (A&R)
3. Power Antenna: 3108 (EMCO) & AT1080 (A&R)
4. Field Monitor: FM2000 (A&R)

Note:

7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT



Fig. 1



Fig. 2



Fig. 3



Fig. 4 EFA-126



Fig. 5 EPA-140



Fig. 6 F-87

8. MANUFACTURER/ APPROVAL HOLDER DECLARATION

The following identical model(s):

EPA-140	EFA-126	F-87	--
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Belong to the tested device:

Product description : Piezo Alarm (Call Point)
Model name : EFA-183

Remark: PCB board, structure and internal of these model(s) are the same, So no additional models were tested.

-----THE END OF REPORT-----