

Langfang Donggang Machinery Equipment Co., LTD

TEST REPORT

Prepared For :	Langfang Donggang Machinery Equipment Co., LTD
Product Name:	Fully automatic packaging machine
Model(s):	L450;L550;PLC450;PLC550;BF450;BF550;CZ450;CZ550;XK6540;XK7540; XK8540;590-120;590-180;590-240;ZS240;ZS320;ZS450;SS4020;SS4525;SS5530;SS6040;SS7040;SS8040
Prepared By :	Shenzhen Waiida Testing Technology Co., Ltd
Assessment Date:	2025-12-15
Date of Report :	2025-12-15
Report No.:	WYD202512082EMC



TEST REPORT

Report Reference No.....:	WYD202512082EMC
Date of issue.....:	2025-12-15
Assessment Laboratory.....:	Shenzhen Waiida Testing Technology Co., Ltd
Address..... :	1101-1, Block C, Building 1, Huarong Road Lianjian Industrial Park, Shanghenglang Community, Dalang Street, Longhua District, Shenzhen
Applicant name.....:	Langfang Donggang Machinery Equipment Co., LTD
Address..... :	Jiazhuang Village, Pingshu Town, Dacheng County, Langfang City, Hebei Province
Assessment specification:	
Standards.....:	EN IEC 61000-6-2:2019; EN IEC 61000-6-4:2019
Non-standard test method.....:	N/A
Assessment Report Form No.....:	--
Test Report Form(s) Originator.....:	
Master TRF.....:	Dated: 2020-08
This report is specially limited to the above client company and product model only. It may not be duplicated without prior written consent.	
Test item description.....:	Fully automatic packaging machine
Trade Mark.....:	N/A
Manufacturer.....:	Langfang Donggang Machinery Equipment Co., LTD
Model..... :	L450
Ratings.....:	N/A



Waiida

Shenzhen Waiida Testing Technology Co., Ltd

Assessment procedure and location:

Assessment Laboratory.....: Shenzhen Waiida Testing Technology Co., Ltd
Address.....: 1101-1, Block C, Building 1, Huarong Road Lianjian Industrial Park, Shanghenglang Community, Dalang Street, Longhua District, Shenzhen

Date of Assessment.....: 2025-12-15

Assessed by (name + signature)..... : **Eric.Zhang**

Reviewed by (name + signature)..... : **Yanlei.Jia**

Approved by (name + signature).....: **Xun.Su**



1. EN IEC 61000-6-2:2019

1.1 Continuous Disturbance Voltage at Mains Terminal.

1.1.1 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Last Cal. Date	Cal. Period
Albatross Projects GmbH	Shield Room	Site 1		2022.10	2 Year
R&S	EMI Test Receiver	ESU40	1302	2022.11	1 Year
R&S	Artificial Mains (Three Line)	ENV4200	1107	2023.2	2 Year
R&S	EMI Test System Cabinet			N/A	N/A
R&S	EMI Test Software	EMC32		N/A	N/A

1.1.2 Description of Measurement Conditions

Temperature: 21°C Humidity: 58% Pressure: 1033mbar Electromagnetic environment: normal

1.1.3 Limits of Continuous Disturbance Voltage at Mains Terminal

Equipment type	Frequency range MHz	Limit values dB μ V	
		Quasi-peak	Average
Household appliance	0.15 to 0.5	66-56 a	56-46 a
	0.5 to 5	56	46
	5 to 30	60	50
a Decreasing linearly with logarithm of the frequency.			

Note: If the limit for the measurement with the average detector is met when using a receiver with a quasi-peak detector, the equipment under test shall be deemed to meet both limits and the measurement using the receiver with an average detector need not be carried out.

1.1.4 Test procedure and the test setup Procedure

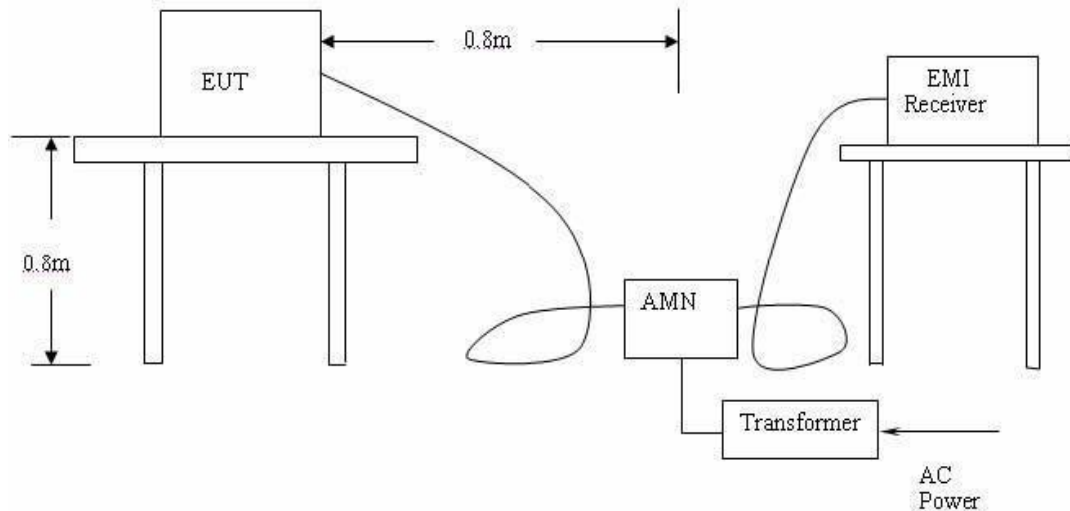
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring Knotting Machine.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under limit -20dB of the prescribed limits could not be reported.

Set-up

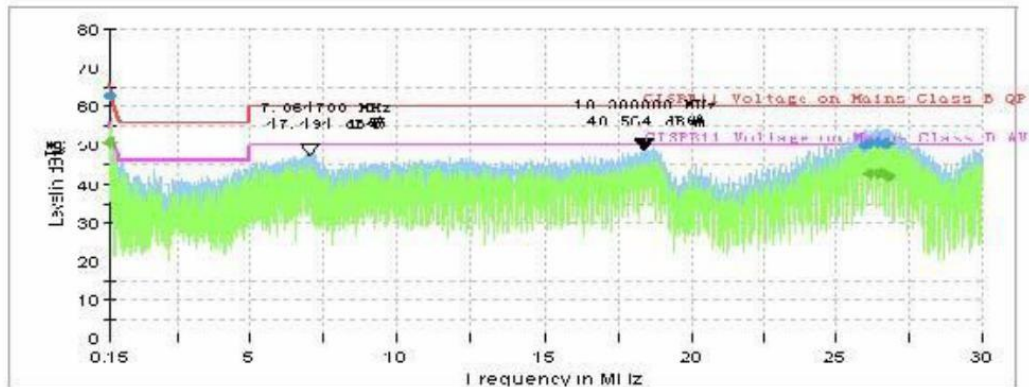
The configuration is in accordance with the requirement in EN 61000-6-2, the sketch map as follow:



1.1.5 Test Data and Records Passed

L:

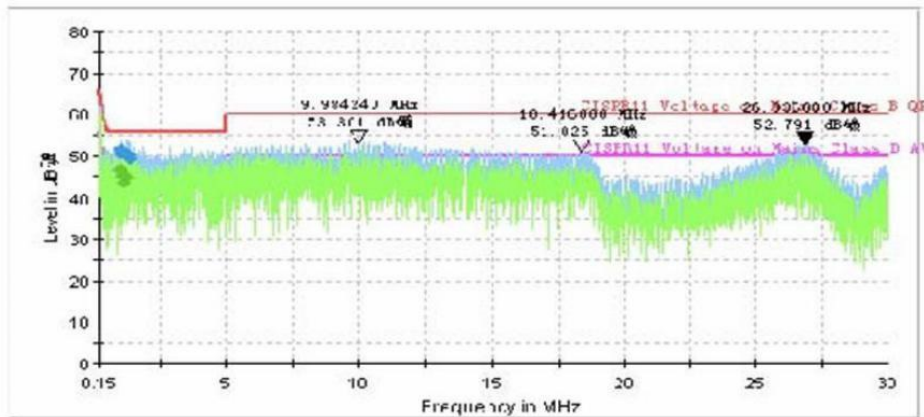
VOLTAGE WITH ENV216 AUTO_Class B



Final Measurement Detector 1

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.154000	50.6	1000.00	9.000	On	L1	9.7	5.2	55.8	
26.202000	42.6	1000.00	9.000	On	L1	10.4	7.4	50.0	
26.424000	42.4	1000.00	9.000	On	L1	10.4	7.6	50.0	
26.426000	42.3	1000.00	9.000	On	L1	10.4	7.7	50.0	
26.522000	42.8	1000.00	9.000	On	L1	10.5	7.2	50.0	
26.826000	41.7	1000.00	9.000	On	L1	10.5	8.3	50.0	

N:

**VOLTAGE WITH ENV216 AUTO_Class B****Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBm)	Comment
0.943880	51.5	1000.00	9.000	On	N	9.8	4.5	56.0	
0.947220	50.5	1000.00	9.000	On	N	9.8	5.5	56.0	
1.219380	49.9	1000.00	9.000	On	N	9.8	6.1	56.0	
1.298660	50.4	1000.00	9.000	On	N	9.8	5.6	56.0	
1.357520	49.2	1000.00	9.000	On	N	9.8	6.8	56.0	
0.943880	51.5	1000.00	9.000	On	N	9.8	4.5	56.0	
0.947220	50.5	1000.00	9.000	On	N	9.8	5.5	56.0	
1.219380	49.9	1000.00	9.000	On	N	9.8	6.1	56.0	
1.298660	50.4	1000.00	9.000	On	N	9.8	5.6	56.0	
1.357520	49.2	1000.00	9.000	On	N	9.8	6.8	56.0	

1.1.6 Verdict

The EUT met the requirement.

1.2 Radiated disturbances**1.2.1 Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Last Cal. Date	Cal. Period
Albatross Projects GmbH	Anechoic Chamber		9290832	2022.10	2 Year
R&S	Ultra-broadband Antennas	HL562		2023.1	2 Year
Inn-co GmbH	Antenna Towers			N/A	N/A
R&S	EMI Test Receiver	ESU40	1302	2022.11	1 Year
Inn-co GmbH	Turntable	DS2000S-1t		N/A	N/A
Inn-co GmbH	Controller	CO 2000	10806L	N/A	N/A
R&S	EMI Test Software	EMC32		N/A	N/A

R&S	EMI Test System Cabinet			N/A	N/A
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1.2.2 Description of Measurement Conditions

Temperature: 20℃ Humidity: 60% Pressure: 1033mbar Electromagnetic environment: normal

1.2.3 Limits of radiated disturbances of class BITE at a measuring distance of 3m

Frequency range MHz	Quasi-peak limits(3m) dB(μ V/m)
30 to 230 230 to 1000	40 47
NOTE: The lower limit shall apply at the transition frequency. NOTE: Additional provisions may be required for cases where interference occurs.	

1.2.4 Test procedure and the test set-

up Procedure

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m semi/full-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarization of the antenna are set to make the measurement.

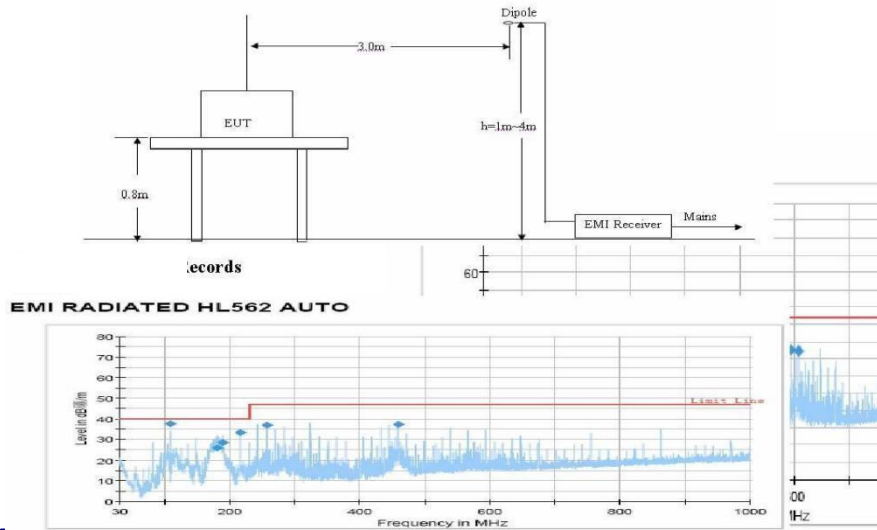
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the turn table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be retested one by one using the quasi- peak method or average method as specified and then reported In Data sheet peak mode and QP mode.

Set-up

The configuration is in accordance with the requirement in EN61000-6-2, the sketch map as follow:



1.2.5 Test Data

Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
107.000000	37.6	1000.00	120.000	266.0	II	201.0	-25.9	2.4	40.0
179.984000	25.9	1000.00	120.000	250.0	V	267.0	-28.0	14.1	40.0
109.023000	20.4	1000.00	120.000	153.0	II	227.0	-20.0	11.0	40.0
215.997500	33.3	1000.00	120.000	116.0	V	138.0	-28.6	6.7	40.0
250.543500	36.9	1000.00	120.000	136.0	II	130.0	-27.1	10.1	47.0
459.031000	37.1	1000.00	120.000	185.0	V	117.0	-22.2	9.9	47.0

1.2.6 Verdict

The EUT met the requirement.

2. EN IEC 61000-6-4:2019

Description of Performance Criterion (According with EN61000-6-1 Section 4)

Performance Criterion A

The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacture, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

Performance Criterion B

The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacture, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

Performance Criterion C

Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

a) SURGES

Manufacturer	Description	Model	Serial Number	Last Cal. Date	Cal. Period
Noise Laboratory CO.,LTD	Surge Lite	LSS-6030	9099E00350	2022.11	2 Year

2.1.1 Test Equipment List and Details

2.1.2 Description of Measurement Conditions

Temperature: 21℃ Humidity: 58% Pressure: 1033mbar Electromagnetic environment: normal

2.1.3 Test procedure and the test set-

up Procedure

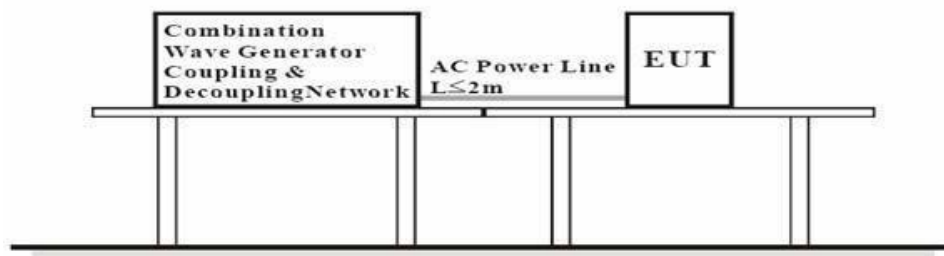
a. For EUT power supply: The surge is to be applied to the EUT power supply terminals via the capacitive coupling network. Decoupling networks are required in order to avoid possible adverse effects on equipment not under test that may be powered by the same lines, and to provide sufficient decoupling impedance to the surge wave. The power cord

between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).

b. For test applied to unshielded unsymmetrically operated interconnection lines of EUT: The surge is applied to the lines via the capacitive coupling. The coupling / decoupling networks shall not influence the specified functional conditions of the EUT. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).

c. For test applied to unshielded symmetrically operated interconnection / telecommunication lines of EUT: The surge is applied to the lines via gas arrestors coupling. Test levels below the ignition point of the coupling arrestor cannot be specified. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).

d. Both positive and negative polarity discharges were applied.



2.1.4 Test Data and Records

Terminal	Voltage KV	Path	Phase	Number Of Impulses	Pass	Fail
MAINS	±1	L- N	0°	5	B	
MAINS	±1	L- N	90°	5	B	
MAINS	±1	L- N	180°	5	B	
MAINS	±1	L- N	270°	5	B	
MAINS	±2	L-PE N-PE	0°	5	B	
MAINS	±2	L-PE N-PE	90°	5	B	
MAINS	±2	L-PE N-PE	180°	5	B	
MAINS	±2	L-PE N-PE	270°	5	B	

2.1.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria B.

2.2 ESD

2.2.1 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Last Date	Cal. Period
Shanghai Sanki	Electrostatic Discharge tester	ESD-320	0329501C	2022.6	2 Year

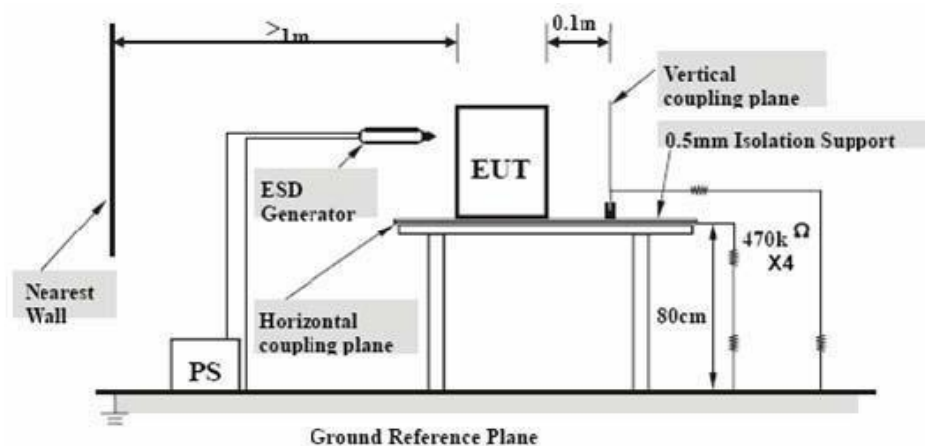
2.2.2 Description of Measurement Conditions

Temperature: 21°C Humidity: 58% Pressure: 1033mbar Electromagnetic environment: normal

2.2.3 Test procedure and the test set-up

Procedure

- a. Electrostatic discharges were applied only to those points and surfaces of the EUT that are accessible to users during normal operation.
- b. The test was performed with at least ten single discharges on the pre-selected points in the most sensitive polarity.
- c. The time interval between two successive single discharges was at least 1 second.
- d. The ESD generator was held perpendicularly to the surface to which the discharge was applied and the return cable was at least 0.2 meters from the EUT.
- e. Contact discharges were applied to the non-insulating coating, with the pointed tip of the generator penetrating the coating and contacting the conducting substrate.
- f. Air discharges were applied with the round discharge tip of the discharge electrode approaching the EUT as fast as possible (without causing mechanical damage) to touch the EUT. After each discharge, the ESD generator was removed from the EUT and re-triggered for a new single discharge. The test was repeated until all discharges were complete.
- g. At least ten single discharges (in the most sensitive polarity) were applied at the front edge of each Horizontal Coupling Plane opposite the center point of each unit of the EUT and 0.1 meters from the front of the EUT. The long axis of the discharge electrode was in the plane of the HCP and perpendicular to its front edge during the discharge.
- h. At least ten single discharges (in the most sensitive polarity) were applied to the center of one vertical edge of the Vertical Coupling Plane in sufficiently different positions that the four faces of the EUT were completely illuminated. The VCP (dimensions 0.5m x 0.5m) was placed vertically to and 0.1 meters from the EUT.



2.2.4 Test Data and Records

Air Discharge

Test Levels																
EN61000-4-2 Test Points	-2 kV	+2 kV	-4 kV	+4 kV	-6 kV	+6 kV	-8 kV	+8 kV	-10 kV	+10 kV	-12.5 kV	+12.5 kV	-15 kV	+15 kV	-20 kV	+20 kV
EUT Front Side	B	B	B	B	B	B	B	B								
EUT Top Side	B	B	B	B	B	B	B	B								
EUT Back Side	B	B	B	B	B	B	B	B								
EUT Left Side	B	B	B	B	B	B	B	B								
EUT Right Side	B	B	B	B	B	B	B	B								

Direct Contact

Test Levels																
EN61000-4-2 Test Points	-2 kV	+2 kV	-4 kV	+4 kV	-6 kV	+6 kV	-8 kV	+8 kV	-10 kV	+10 kV	-12.5 kV	+12.5 kV	-15 kV	+15 kV	-20 kV	+20 kV
EUT Front Side	B	B	B	B												
EUT Top Side	B	B	B	B												
EUT Back Side	B	B	B	B												
EUT Left Side	B	B	B	B												
EUT Right Side	B	B	B	B												

2.2.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria B.

2.3 EFT/B

2.3.1 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Last Date	Cal. Period
Shanghai Sanki	E.F.TB Generator	8014	069504E	2022.6	2 Year

2.3.2 Description of Measurement Conditions

Temperature: 21°C Humidity: 58% Pressure: 1033mbar Electromagnetic environment: normal

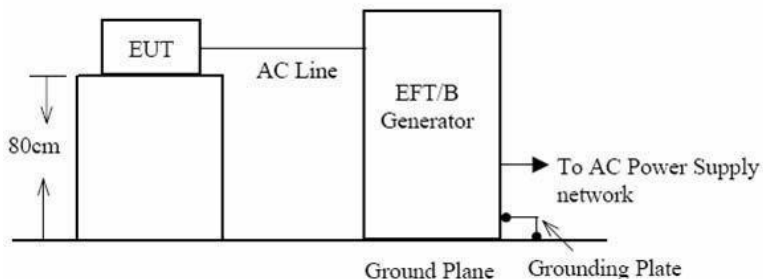
2.3.3 Test procedure and the test set-

up Procedure

- Both positive and negative polarity discharges were applied.
- The length of the "hot wire" from the coaxial output of the EFT generator to the terminals on the EUT should not exceed 1 meter.
- The duration time of each test sequential was 1 minute.

d. The transient/burst waveform was in accordance with IEC 61000-4-4, 5/50ns.

Set-up



2.3.4 Test Data and Records

Test Levels (kV)									
EN61000-4-4 Test Points		+0.25	-0.25	+0.5	-0.5	+1.0	-1.0	+2.0	-2.0
Power Port of EUT	L	A	A	A	A	A	A		
	N	A	A	A	A	A	A		
	PE	A	A	A	A	A	A		
	L+N+PE	A	A	A	A	A	A	A	A

2.3.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria A.

2.4 INJECTED CURRENTS

2.4.1 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Last Cal. Date	Cal. Period
Giga-tronics	Synthesized RF Signal Generator	6061A	5130304	2023.2	2 Year
QF	Broadband Power Amplifier	QF3860	--	2023.2	2 Year
QF	Millivoltmeter	QF2281	92028	2023.2	2 Year

2.4.2 Description of Measurement Conditions

Temperature: 21°C Humidity: 58% Pressure: 1033mbar Electromagnetic environment: normal

2.4.3 Test procedure and the test set-up Procedure

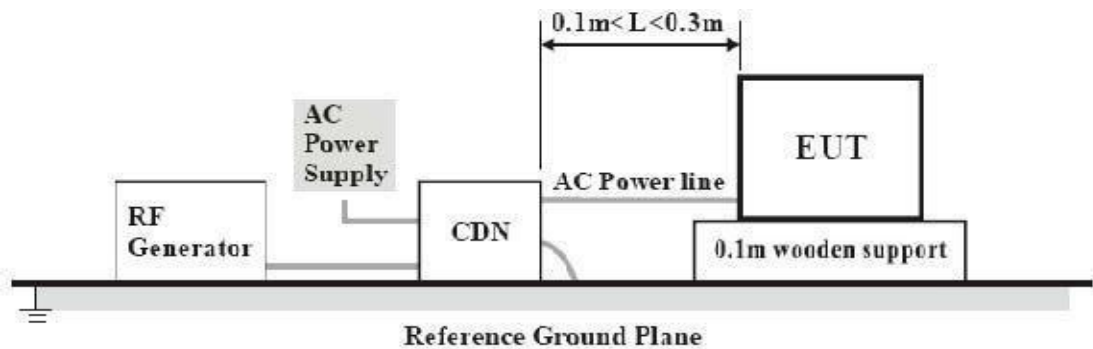
a. The EUT shall be tested within its intended operating and climatic conditions.

b. The test shall be performed with the test generator connected to each of the coupling and decoupling devices in turn, while the other non-excited RF input ports of the coupling devices are terminated by a 50-ohm load resistor.

c. The frequency range is swept from 150 kHz to 80 MHz, using the signal level established during the setting process and with a disturbance signal of 80 % amplitude. The signal is modulated with a 1 kHz sine wave, pausing to adjust the RF signal level or the switch coupling devices as necessary. The sweep rate shall not exceed 1.5×10^{-3} decades/s. The step size shall not exceed 1 % of the start and thereafter 1 % of the preceding frequency value where the frequency is swept incrementally.

d. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised, and able to respond. Sensitive frequencies such as clock frequency(ies) and harmonics or frequencies of dominant interest, shall be analyzed separately.

e. Attempts should be made to fully exercise the EUT during testing, and to fully interrogate all exercise modes selected for susceptibility.



2.4.4 Test Data and Records

EN 61000-4-6 Test Points	Frequency range MHz	Levels	Voltage Level (e.m.f.)V	Pass	Fail
Power Line	0.15-80MHz	1	1		
		2	3	A	
		3	10		
		X	Special		

2.4.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria A.

2.5 VOLTAGE DIPS AND INTERRUPTIONS

2.5.1 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Last Date	Cal. Cal. Period
Noise Laboratory CO., LTD	Voltage Dip Simulator	VDS-220B	2199D00098	2022.10	2 Year

2.5.2 Description of Measurement Conditions

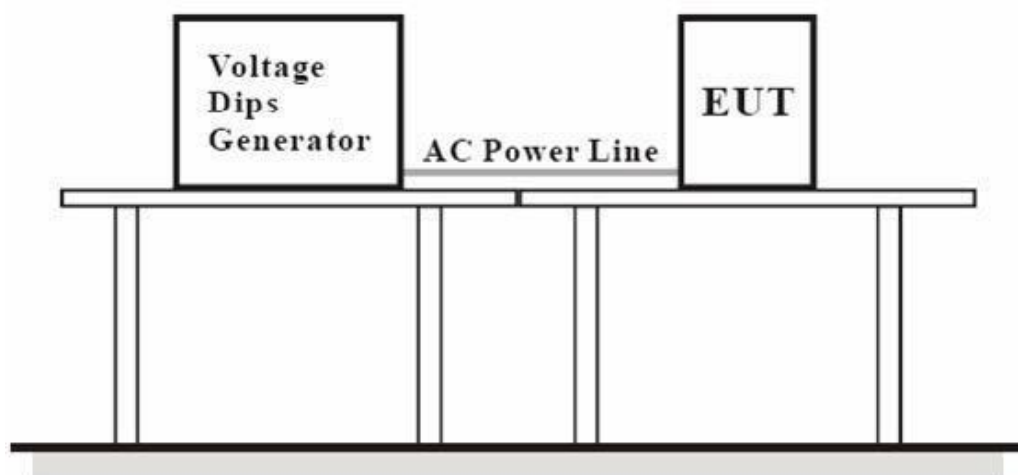
Temperature: 21°C Humidity: 58% Pressure: 1033mbar Electromagnetic environment: normal

2.5.3 Test procedure and the test set-up

Procedure

The EUT shall be tested for each selected combination of test levels and duration with a sequence of treedips/interruptions with intervals of 10 s minimum (between each test event). Each representative mode of operation shall be tested. Abrupt changes in supply voltage shall occur at zero crossings of the voltage waveform.

Set-up



2.5.4 Test Data and Records

Environmental phenomena		Test level in % UT	(in periods of the rated frequency) Duration	Phase Angle	Pass	Fail
Interruptions		>95	250T	0/180	B	
Voltage dips in % UT	0	100	0,5T	0/180	B	
	0	100	1T	0/180	B	
	70	30	25 T	0/180	B	

2.5.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria B.

2.6 Radio-frequency electromagnetic field

2.6.1 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Last Cal. Date	Cal. Period
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R&S	Signal Generator	SMR-40	1104	2022.11	1 Year
QF	Broadband Power Amplifier	QF3860	---	2023.2	2 Year
QF	Millivoltmeter	QF2281	92028	2023.2	2 Year
Albatross Projects GmbH	Anechoic Chamber		9290832	2022.10	2 Year
R&S	Ultra-broadband Antennas	HL562		2022.1	2 Year
Inn-co GmbH	Antenna Towers			N/A	N/A
Inn-co GmbH	Turntable	DS2000S-1t		N/A	N/A
Inn-co GmbH	Controller	CO 2000	10806L	N/A	N/A

2.6.2 Description of Measurement Conditions

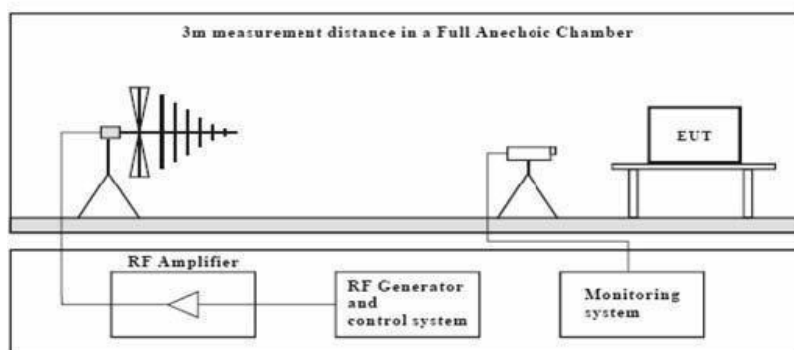
Temperature: 20°C Humidity: 60% Pressure: 1033mbar Electromagnetic environment: normal

2.6.3 Test procedure and the test set-up

Procedure

The test procedure was in accordance with EN 61000-4-3

- The testing was performed in a fully-anechoic chamber. The transmit antenna was located at a distance of 3 meters from the EUT.
- The frequency range is swept from 80 MHz to 1000 MHz with the signal 80% amplitude modulated with a 1kHz sinewave. The rate of sweep did not exceed 1.5×10^{-3} decade/s. Where the frequency range is swept incrementally, the step size was 1 % of preceding frequency value.
- The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
- The field strength level was 3V/m.
- The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.



2.6.4 Test Data and Records

The EUT was tested that it worked at the normal state.

FrequencyRange(MHz)	Front Side (3 V/m)		Rear Side (3 V/m)		Left Side (3 V/m)		Right Side (3 V/m)	
80-1000	VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
	A	A	A	A	A	A	A	A

2.6.5 Verdict

The EUT was working as normal, so it met the requirement of performance criteria A.

2.7 Power-frequency magnetic field

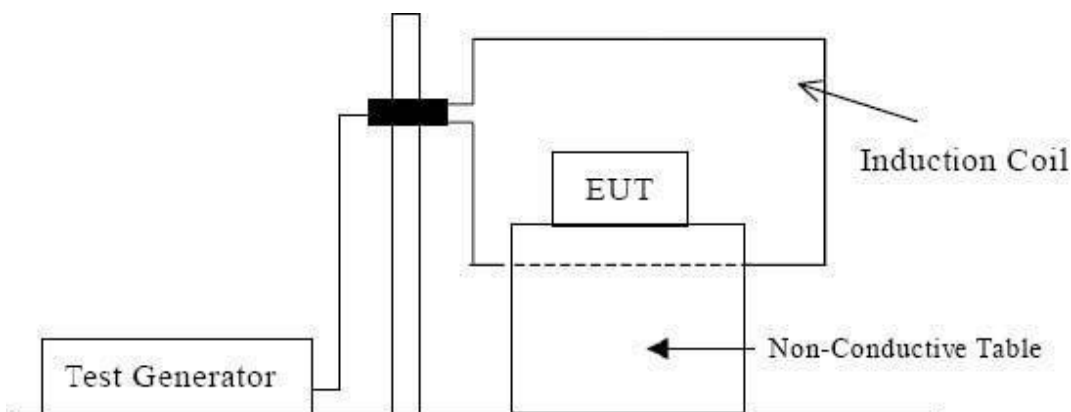
2.7.1 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Last Cal. Date	Cal. Due Date
HAEFELY TEST AG	Magnetic field tester	MGA 100	152676	2022.10	2 Year
EMCO	Active loop	6502	9003-2484	2022.10	2 Year

2.7.2 Description of Measurement Conditions

Temperature: 22℃ Humidity: 59% Pressure: 1033mbar Electromagnetic environment: normal

2.7.3 Configuration



2.7.4 Test Data and Records

Power Frequency Magnetic Field	Testing Duration	Coil Orientation	Pass
50Hz, 60 Hz 3 A/m	1 Min	X-axis	A
50Hz, 60 Hz 3 A/m	1 Min	Y-axis	A
50Hz, 60 Hz 3 A/m	1 Min	Z-axis	A

2.7.5 Verdict

The EUT was working as normal, so it met the requirement of performance criteria A.

Annex

Photo of machine





Nameplate

Fully automatic packaging machine

Model(s):L450



Manufacturer: Langfang Donggang Machinery Equipment Co., LTD

Address: Jiazhuang Village, Pingshu Town, Dacheng County, Langfang City, Hebei Province

Notice

3. This evaluation report is for samples only.
4. This evaluation report has assessed the basic requirements of the sample according to relevant standards.
5. This evaluation report is invalid without authorized signature.
6. This assessment report shall not be altered or deleted,
7. This assessment report shall not be used as a forensic expertise.
8. This assessment report is internal data and does not have the ability of public disclosure.
9. Client shall put forward demurrer within 15days after received report. laboratory shall refuse disposal if exceeded the time limit.
10. The assessment results presented in this report relate only to the object assessment.