EMC TEST REPORT

On Behalf of

Product Name:	Cable Cutting and Stripping Machine
Trademark:	N/A
Model Number:	TR-880H (See next page for details)
Prepared For:	Dongguan Turing Automation Technology Co., Ltd
Address:	7th Floor, Building C, Beitang Industrial Park, No. 80, Tangxia Section, Qingzhang Road, Tangxia Town, Dongguan City, Guangdong Province,China ,523710
Prepared By:	Shenzhen Huaxiang Testing Co., Ltd
Address:	201, Building A10, Fuhai Information Port, Fuhai Street, Bao'an District, Shenzhen City
Report No.:	HUAX240627001KR

Model (S)

TR-QD15, TR-416, TR-5F, TR-340, TR-330, TR-310, TR-4F+Y, TR-416, TR-350, TR-310N, TR-310A, TR-120W, TR-4FN+Y, TR-3FN+Y, TR-4FN, TR-305, TR-201, TR-DZ200, TR-DZ100X, TR-B745, TR-DZ150A, TR-620, TR-640, TR-820, TR-3FN, TR-315Z, TR-660, TR-3FA, TR-3FN+O, TR-3FN+Y+O, TR-4F, TR-315, TR-3F1, TR-3F, TR-19, TR-5806, TR-6806D, TR-8608, TR-8608D, TR-3515, TR-4520, TR-4520S, TR-5010, TR-300, TR-500, TR-1200, TR-3520, TR-2515, TR-6010, TR-2520, TR-8018, TR-7006, TR-A0706, TR-2310, TR-2315 , TR-252, TR-3530, TR-4520, TR-4520S, TR-5010, TR-JE2-N, TR-MAX2-S95, TR-508 MAX4, TR-YHT4, TR-SDB2-S, TR-MAX2-ST50, TR-MAX2-S70, TR-MAX1-8S , TR-MAX1-8N, TR-MAX1-6S, TR-MAX1-6N, TR-MAX1-4N , TR-MAX1-4S, MAX2-ST50, MAX2-ST70, TR-HT2-S , TR-MAX3-S150, TR-HT2-6S, TR-C-N, TR-JE2-S, TR-C03, TR-PX2, TR-JE-S , TR-YHT3, TR-YHT2, TR-SDB2-N, TR-SDB2-S, TR-SDB-N, TR-SDB-S, TR-SD-S, TR-SD-N, TR-NX2-S, TR-NX2-N, TR-MAX2 TR-MAX1-6SP TR-JE-N , TR-HT2-N, TR-E-S, TR-E-N , TR-BHT2-N, TR-QG-4S, TR508-16ZW, TR508-25ZW, TR-835F, TR-8030H, TR-810N, TR-870F, TR-850F, TR-503N, TR-810NP, TR-8030YJP, TR-8030HYJS, TR-8030, TR-8120P, TR-816F, TR-8030HYJ, TR-8120, TR-8030HYJN, TR-8010, TR-8030Y, TR-820N, TR-820F, TR-820D, TR-810P, TR-9935, TR-8030Z, TR-C02, TR-840C, TR-C4, TR-C01, TR-BX200, TR-3500BJ, TR-NX11, TR-7006, TR-8400X, TR-9600, TR-9615, TR-9800, TR-9935, TR-880, TR-880L, TR-880XL, TR-880XXL, TR-8008, TR-400F, TR-400XL, TR-880D, TR-880T, TR-808, TR-881XXL, TR-500F, TR-810C, TR-820C, TR-840C, TR-820D, TR-820F, TR-816F, TR-825F, TR-895F, TR-820N, TR-820NP, , TR-810NJ, TR-870N, TR-CR8-35S, TR-CR20-55S, TR-CR8-35Z, TR-CR20-25Z, TR-BD028, TR-BD030L, TR-BD032L, TR-BD033S, TR-BD036S, TR-8030, TR-8030G, TR-8030YJ, TR-8030HYJN, TR-8050, TR-8150, TR-8150Q, TR-8240, TR-8300, TR-8300X, TR-F380, TR-F680, TR-FL85, TR-F815, TR-8030X, TR-8010, TR-8010H, TR-F810, TR-9800, TR-9600S, TR-9615, TR-EVA, TR-200MS, TR-120XL, TR-201MS, TR-200LR, TR-700L, TR-400L, TR-121LXZ, TR-200XZ, TR-120R, TR-120LDB, TR-120RDK, TR-120L, TR-120LZH, TR-120LRS, TR-300, TR-L170 , TR-LH120, TR-200, TR-LH200, TR-120LR, TR-400L, TR-600

TABLE OF CONTENT

Test Report Description

TEST REPORT DECLARATION

Applicant	:	**Dongguan Turing Automation Technology Co., Ltd**
Address :	:	7th Floor, Building C, Beitang Industrial Park, No. 80, Tangxia Section, Qingzhang Road, Tangxia Town, Dongguan City, Guangdong Province,China ,523710
Manufacturer:	:	**Turing**
Address :	:	7th Floor, Building C, Beitang Industrial Park, No. 80, Tangxia Section, Qingzhang Road, Tangxia Town, Dongguan City, Guangdong Province,China ,523710
EUT Description :	:	**Cable Cutting and Stripping Machine**
Model Number	:	**TR-880H**
Rating(s)	:	AC 110-220V, 50/60Hz,
Test Date		Jun. 26, 2024 - Jul. 02, 2024
Date of Report		Jul. 02, 2024

Test Standards:

EN IEC 61000-6-3: 2021
EN IEC 61000-6-1: 2019
EN IEC 61000-3-2: 2019+A1:2021
EN 61000-3-3: 2013+A2:2021

The EUT described above is tested by Huaxiang Testing Co., Ltd. EMC Laboratory to determine the maximum emissions from the EUT and ensure the EUT to be compliance with the immunity requirements of the EUT. Shenzhen Huaxiang Testing Co., Ltd. is assumed full responsibility for the accuracy of the test results. Also, this report shows that the EUT technically complies with the2014/30/EU directive and its amendment requirements.
The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Prepared by(Test Engineer): Joan Wang

Approved(Manager): Amy Jiang

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	Cable Cutting and Stripping Machine
Model	:	TR-880H
Supplementary Model	:	See page 2
Rating	:	AC 110-220V, 50/60Hz
Applicant	:	Dongguan Turing Automation Technology Co., Ltd
Address	:	7th Floor, Building C, Beitang Industrial Park, No. 80, Tangxia Section, Qingzhang Road, Tangxia Town, Dongguan City, Guangdong Province,China ,523710
Manufacturer	:	Turing
Address	:	7th Floor, Building C, Beitang Industrial Park, No. 80, Tangxia Section, Qingzhang Road, Tangxia Town, Dongguan City, Guangdong Province,China ,523710

1.2.Test Standards

Test Standards	
EN IEC 61000-6-3: 2021	Emission standard for residential. commercial and light-industrial environments
EN IEC 61000-6-1: 2019	Immunity for residential. commercial and light-industrial environments
EN IEC 61000-3-2: 2019+A1:2021	Electromagnetic compatibility(EMC)-Part 3-2:Limits-Limits for harmonic current emissions(equipment input current ≤16A per phase)
EN 61000-3-3: 2013+A2:2021	Electromagnetic compatibility(EMC)-Part 3-3:Limits-Limitation of voltage changes,Voltage fluctuations and fliker in public low-voltage supply systems. For equipment with Rated current ≤16A per phase and not subject to conditional connection

1.3. Test Summary

For the EUT described above.

Table 1: Tests Carried Out Under EN IEC 61000-6-3: 2021

Standard	Test Items	Status
EN IEC 61000-6-3: 2021	Disturbance Voltage at The Mains Terminals (150KHz To 30MHz)	√
	Radiated Disturbances (30MHz To 1000MHz)	√

√ Indicates that the test is applicable

× Indicates that the test is not applicable

Table 2: Tests Carried Out Under EN IEC 61000-6-1: 2019

Standard	Test Items	Status
EN61000-4-2:2009	Electrostatic discharge Immunity	√
EN61000-4-3:2006 +A1:2008+A2:2010	Radiated Susceptibility (80MHz to 1GHz)	√
EN61000-4-4:2004+A1:2010	Electrostatic Fast Transient/Burst Immunity	√
EN61000-4-5:2006	Surge Immunity	√
EN61000-4-6:2009	Conducted Susceptibility (150KHz to 80MHz)	√
EN61000-4-8:2010	Power Frequency Magnetic Field Immunity (12.4.5KW)	√
EN61000-4-11:2004	Voltage Dips Short Interruptions Immunity Tests	√

√ Indicates that the test is applicable

√ Indicates that the test is not applicable

Table 3: Tests Carried Out Under EN IEC 61000-3-2: 2019+A1:2021& EN 61000-3-3:2013

Standard	Test Items	Status
EN IEC 61000-3-2: 2019+A1:2021	Harmonic Current	√
EN 61000-3-3: 2013+A2:2021	Voltage Fluctuations	√

√ Indicates that the test is applicable

√ Indicates that the test is not applicable

1.4. Test Methodology

All measurements contained in this report were conducted with CISPR 16-1: 2002, radio disturbance and immunity measuring apparatus, and CISPR16-2, Method of measurement of disturbances and immunity.

All measurement required was performed at laboratory of Shenzhen Huaxiang Testing Co., Ltd.,

1.5. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files Registration 222278.

The facility also complies with the radiated and AC line conducted test site criteria set forth in CISPR 16-1, CISPR16-2.

1.6. Measurement Uncertainty

Radiation Uncertainty : Ur = ± 3.84dB

Conduction Uncertainty : Uc = ± 2.72dB

2. MEASURING DEVICE AND TEST EQUIPMENT

2.1.For Power Line Conducted Emission

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI EMI TEST RECEIVER	ID:1166.5950K 03-101431-Jq	Nov. 20, 2023	1 Year
2.	L.I.S.N.	Rohde & Schwarz	ESH3-Z5	831.5518.52	Nov. 20, 2023	1 Year
3.	Pulse Limiter	SCHWARZ BECK	VTSD 9561-F	9561-G071	Nov. 20, 2023	1 Year

2.2.For Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4408B	CFG006	Nov. 20, 2023	1 Year
2.	Test Receiver	Rohde & Schwarz	ESPI TEST RECEIVER	ID:1164.6607K0 3-102109-MH	Nov. 20, 2023	1 Year
3.	Bilog Antenna	Sunol Sciences	Model JB6 Antenna	A090414	Nov. 20, 2023	1 Year
4.	50 Coaxial Switch	Anritsu Corp	MP59B	6100237248	/	/
5.	Horn Ant	Schwarzbeck	Model DRH-118	A091114	Nov. 20, 2023	1 Year

2.3.For Harmonic Current / Flicker Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Conditioning Unit	SCHAFFNER	CCN1000-1	72314	Nov. 20, 2023	1 Year
2.	Power Supply	SCHAFFNER	NSG1007-3-240	56110	Nov. 20, 2023	1 Year

2.4.For Electrostatic Discharge Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ESD Tester	PRIMA	ESD6100	144305	Nov. 20, 2023	1 Year

2.5.For Electrical Fast Transient /Burst Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Burst Tester	HTEC	HETR-880H 51	144303	Nov. 20, 2023	1Year
2.	Coupling Clamp	HAEFELY	IP-4A	147147	/	/

2.6.For Surge Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Surge Tester	HTEC	HCWG	144302	Nov. 20, 2023	1Year

2.7.For Injected Current Susceptibility Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Simulator	SCHAFFNER	NSG2070	1086	Nov. 20, 2023	1Year
2.	CDN	SCHAFFNER	M016	20812	Nov. 20, 2023	1Year
3.	CDN	SCHAFFNER	M016	20812	Nov. 20, 2023	1Year
4.	Attenuator	SCHAFFNER	INA 2070-1	2086	Nov. 20, 2023	1Year

2.8.For Magnetic Field Immunity Test

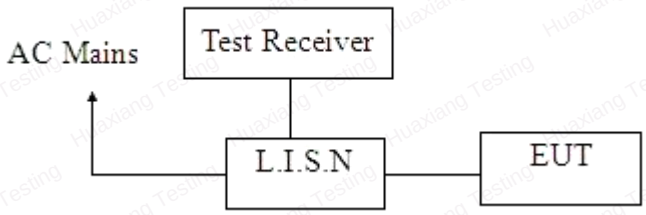
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Magnetic Field Tester	HTEC	HPFM T	144301	Nov. 20, 2023	1Year

2.9.For Voltage Dips and Interruptions Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Dips Tester	HTEC	HPFS	144304	Nov. 20, 2023	1Year

3. POWER LINE CONDUCTED EMISSION MEASUREMENT

3.1.Block Diagram of Test Setup



3.2.Measuring Standard

EN IEC 61000-6-3: 2021

Power Line Conducted Emission Limits (Class B)

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50 ~ 5.00	56.0	46.0
5.00 ~ 30.00	60.0	50.0
NOTE1-The lower limit shall apply at the transition frequencies. NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

3.3.EUT Configuration on Measurement

The following equipments are installed on Conducted Emission Measurement to meet EN61000-6-3 requirements and operating in a manner which tends to maximize its emission characteristics in a normal application.

EUT : Cable Cutting and Stripping Machine
Model Number : TR-880H
Serial Number : N/A

3.4.Operating Condition of EUT

3.4.1.Setup the EUT as shown on Section 3.1.

3.4.2.Turn on the power of all equipments.

3.4.3.Let the EUT work in measuring mode (On) and measure it.

3.5.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and connected to the AC mains through Line Impedance Stability Network (L.I.S.N). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are investigated to find out the maximum conducted emission according to the EN61000-6-3regulations during conducted emission measurement.

The bandwidth of the field strength meter (R&S Test Receiver ESCI 3) is set at 9KHz in 150KHz~30MHz and 200Hz in 9KHz~150KHz.

The frequency range from 150kHz to 30MHz is investigated

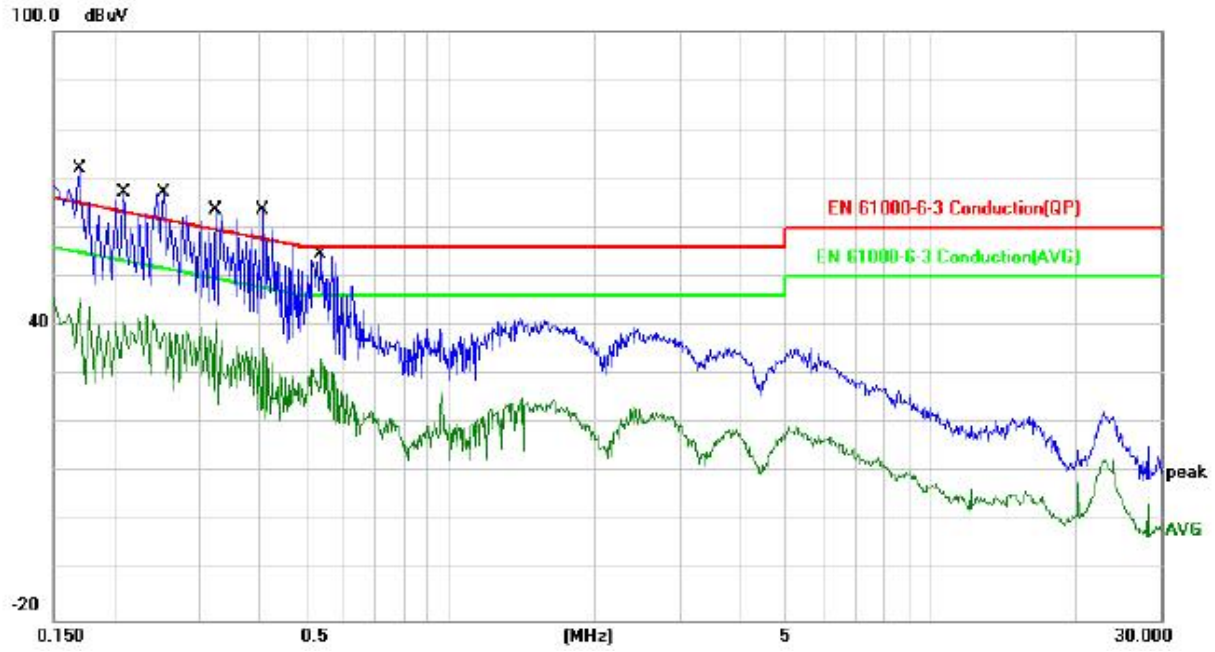
3.6.Measuring Results

PASS

Please reference to the following pages.

Conducted Emission Test Data

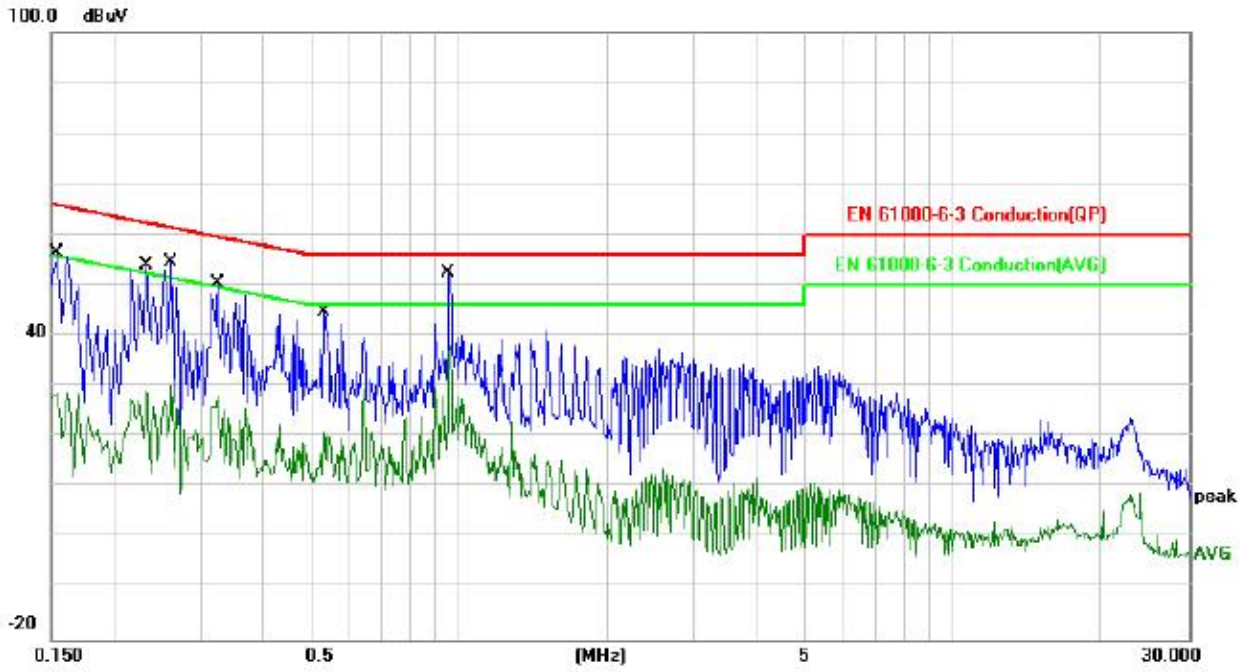
EUT	:	Cable Cutting and Stripping Machine	Model	:	TR-880H
Operating Condition	:	Normal Working	Test Site:	:	Shielded Room
Power Supply	:	AC 110-220V, 50/60Hz	Phase	:	L-line
Operator:	:	Mark	Tem	:	24℃ Hum:55%
Start of Test:	:	2024-06-28			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1683	46.11	0.00	46.11	65.04	-18.93	QP	
2		0.1683	25.48	0.00	25.48	55.04	-29.56	AVG	
3		0.2117	47.60	0.00	47.60	63.13	-15.53	QP	
4		0.2117	28.74	0.00	28.74	53.13	-24.39	AVG	
5		0.2573	39.66	0.00	39.66	61.52	-21.86	QP	
6		0.2573	22.04	0.00	22.04	51.52	-29.48	AVG	
7		0.3266	39.06	0.00	39.06	59.54	-20.48	QP	
8		0.3266	21.19	0.00	21.19	49.54	-28.35	AVG	
9		0.4080	35.77	0.00	35.77	57.69	-21.92	QP	
10		0.4080	17.85	0.00	17.85	47.69	-29.84	AVG	
11	*	0.5347	42.59	0.00	42.59	56.00	-13.41	QP	
12		0.5347	25.26	0.00	25.26	46.00	-20.74	AVG	

Conducted Emission Test Data

EUT	:	Cable Cutting and Stripping Machine	Model	:	TR-880H
Operating Condition	:	Normal Working	Test Site:	:	Shielded Room
Power Supply	:	AC 110-220V, 50/60Hz,	Phase	:	N-line
Operator:	:	Mark	Tem	:	24℃ Hum:55%
Start of Test:	:	2024-06-28			

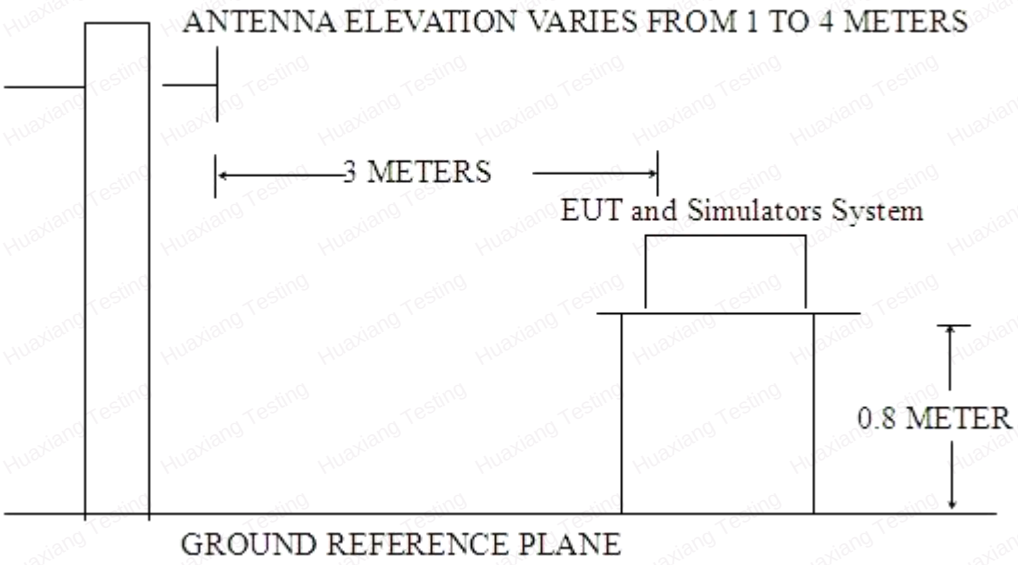


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1554	45.04	0.00	45.04	65.70	-20.66	QP	
2		0.1554	19.01	0.00	19.01	55.70	-36.69	AVG	
3		0.2346	40.28	0.00	40.28	62.28	-22.00	QP	
4		0.2346	17.35	0.00	17.35	52.28	-34.93	AVG	
5		0.2648	39.66	0.00	39.66	61.28	-21.62	QP	
6		0.2648	18.10	0.00	18.10	51.28	-33.18	AVG	
7		0.3243	39.71	0.00	39.71	59.59	-19.88	QP	
8		0.3243	24.57	0.00	24.57	49.59	-25.02	AVG	
9		0.5345	33.09	0.00	33.09	56.00	-22.91	QP	
10		0.5345	13.52	0.00	13.52	46.00	-32.48	AVG	
11	*	0.9545	44.93	0.00	44.93	56.00	-11.07	QP	
12		0.9545	29.87	0.00	29.87	46.00	-16.13	AVG	

4. RADIATED EMISSION MEASUREMENT

4.1.Block Diagram of Test

4.1.1.Block diagram of test setup (In chamber)



4.2.Measuring Standard

EN IEC 61000-6-3: 2021

4.3.Radiated Emission 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 (dBμV/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 EN61000-6-3 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 (Normal) and measure it.

4.6.Test Procedure

The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table 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 a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Bilog antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the Receiver (ESCI 3) is set at 120kHz.

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

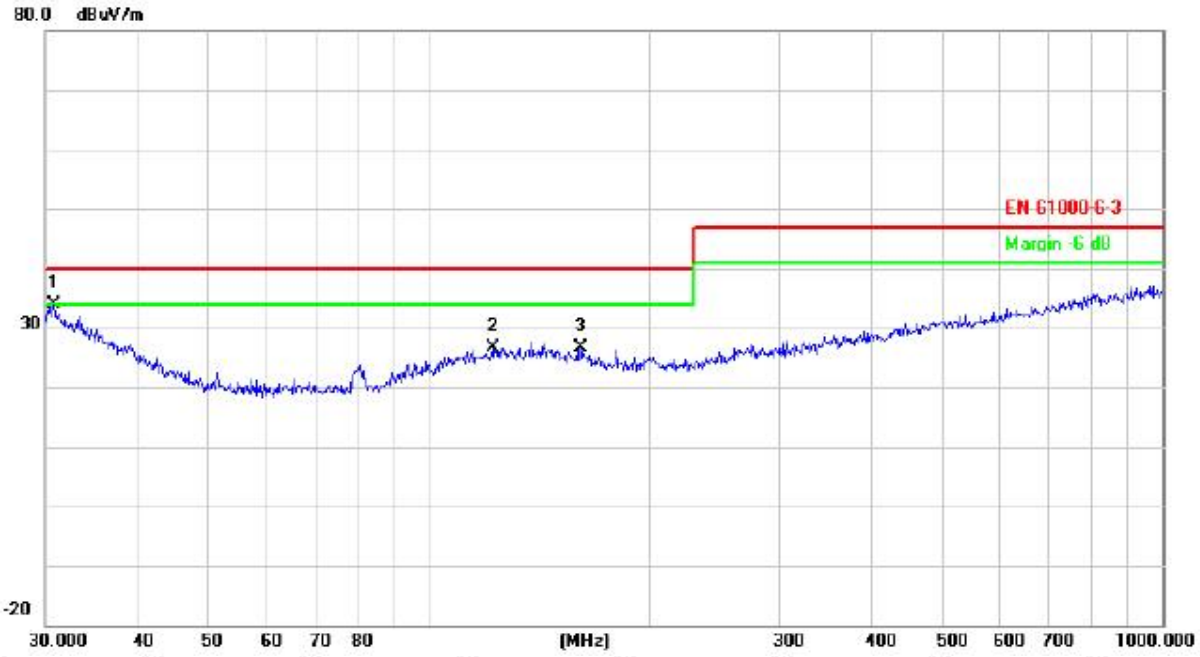
4.7.Measuring Results

PASS

Please reference to the following pages

Radiated Emission Test Data

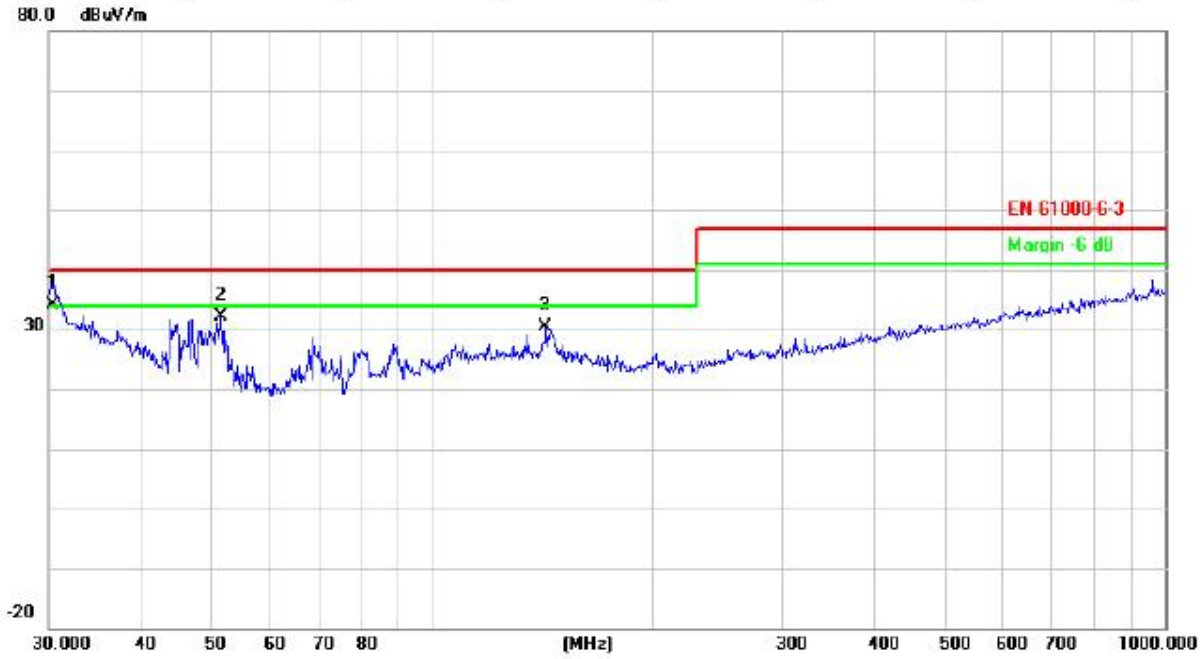
EUT	:	Cable Cutting and Stripping Machine	Model	:	TR-880H
Operating Condition	:	Normal Working	Test Site:	:	Shielded Room
Power Supply	:	AC 110-220V, 50/60Hz,	Polarziation	:	Horizontal
Operator:	:	Mark	Tem	:	24℃ Hum:55%
Start of Test:	:	2024-06-28			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	30.7455	13.94	19.92	33.86	40.00	-6.14	peak			
2		122.4040	12.88	13.80	26.68	40.00	-13.32	peak			
3		160.9089	13.62	13.05	26.67	40.00	-13.33	peak			

Radiated Emission Test Data

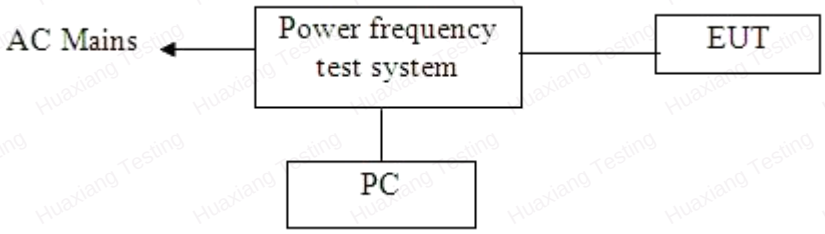
EUT	:	Cable Cutting and Stripping Machine	Model	:	TR-880H
Operating Condition	:	Normal Working	Test Site:	:	Shielded Room
Power Supply	:	AC 110-220V, 50/60Hz,	Polarziation:	:	Vertical
Operator:	:	Mark	Tem	:	24℃ Hum:55%
Start of Test:	:	2024-06-28			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	30.3173	12.58	21.65	34.23	40.00	-5.77	QP			
2		51.4807	23.79	8.37	32.16	40.00	-7.84	peak			
3		142.8243	17.36	12.94	30.30	40.00	-9.70	peak			

5. HARMONIC CURRENT EMISSION MEASUREMENT

5.1.Block Diagram of Test Setup



5.2.Measuring Standard

EN IEC 61000-3-2: 2019+A1:2021

5.3.Operation Condition of EUT

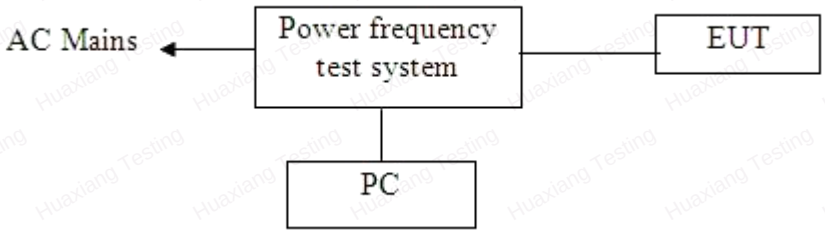
Same as Section 3.4, except the test setup replaced as Section 5.1.

5.4.Measuring Results

N/A

6. VOLTAGE FLUCTUATION AND FLICKER MEASUREMENT

6.1.Block Diagram of Test Setup



6.2.Measuring Standard

EN 61000-3-3: 2013+A2:2021

6.3.Operation Condition of EUT

6.3.1.Setup the EUT and simulators as shown in Section6.1.

6.3.2.Turn on the power of all equipments.

6.3.3.Let the EUT work in test modes (Normal) and test it.

6.4.Measuring Results

PASS

Please reference to the following page

EN 61000-3-3 TEST REPORT 2024-06-28 15:23

Unit: Cable Cutting and Stripping Machine M/N: TR-880H
Test mode: Normal Working

Manufacturer: Dongguan Turing Automation Technology Co., Ltd

Operator: Mark

==========

TEST SETUP

Test Freq.:	50.00 Hz.	Test Voltage:	230.0 vac
Waveform :	SINE		
Test Time:	120.0 min.	Tshort:	10.0 min.
Prog. Zo Enabled:	YES	Prog. Zo:	0.000

Voltage Change less than once per Hour: NO
Impedance selected: IEC-725 STD. REF.

Synthetic R+L Enabled: NO
Resistance: 0.380 Ohms Inductance: 460.000 uH

TEST DATA

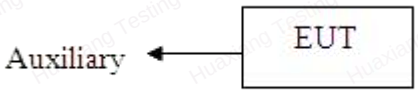
Result: PASS

	EUT Data	Limit	Result	Test Enabled
Pst max	0.170	1.00	PASS	true
Plt max	0.152	0.65	PASS	true
dc %	0.00	3.00	PASS	true
dmax %	1.21	4.00	PASS	true
d(t) sec.	0.00	0.20	PASS	true
Power Source Data				
Source Pst max	0.231	0.400	PASS	true
% THD	0.03	3.00	PASS	true

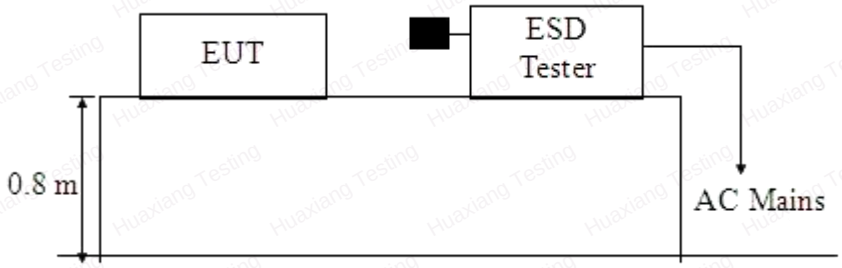
7. ELECTROSTATIC DISCHARGE IMMUNITY TEST

7.1.Block Diagram of Test Setup

7.1.1.Block Diagram of the EUT and the simulators



7.1.2.Block diagram of ESD test setup



7.2.Test Standard

EN IEC 61000-6-1: 2019(EN61000-4-2: 2009)

Severity Level: 3 / Air Discharge: ±8KV Level: 2 / Contact Discharge: ±4KV)

7.3.Severity Levels and Performance Criterion

7.3.1. 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

7.3.2.Performance criterion: **B**

7.4.EUT Configuration

The configuration of EUT is listed in Section 3.3.

7.5.Operating Condition of EUT

Same as conducted emission measurement, which is listed in Section 3.4. Except the test set up replaced by Section 7.1.

7.6.Test Procedure

7.6.1.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.

7.6.2.Contact Discharge:

All the procedure shall be same as Section 7.6.1. except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

7.6.3.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.

7.6.4.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.

7.7.Test Results

PASS

Please refer to the following page

Electrostatic Discharge Test Result

Applicant	:	Dongguan Turing Automation Technology Co., Ltd	Test Date	:	2024-06-28
EUT	:	Cable Cutting and Stripping Machine	Temperature	:	22℃
M/N	:	TR-880H	Humidity	:	50%
Power Supply	:	AC 110-220V, 50/60Hz,	Test Mode	:	Full load
Air discharge	:	±2.0KV,±4.0KV,±6.0KV,±8.0KV	Criterion	:	B
Contact discharge	:	±2.0KV,±4.0KV	Test Engineer	:	Mark

Air Discharge

Test Points	Test Levels			Results		
	± 2kV	± 4kV	± 8kV	Passed	Fail	Performance Criterion
Front	☒	☒	☒	☒	☐	☐ A ☒ B
Back	☒	☒	☒	☒	☐	☐ A ☒ B
Left	☒	☒	☒	☒	☐	☐ A ☒ B
Right	☒	☒	☒	☒	☐	☐ A ☒ B
Top	☒	☒	☒	☒	☐	☐ A ☒ B
Bottom	☒	☒	☒	☒	☐	☐ A ☒ B

Contact Discharge

Test Points	Test Levels			Results		
	± 2 kV	±4 kV	± 6kV	Passed	Fail	Performance Criterion
Front	☒	☒	☐	☒	☐	☐ A ☒ B
Back	☒	☒	☐	☒	☐	☐ A ☒ B
Left	☒	☒	☐	☒	☐	☐ A ☒ B
Right	☒	☒	☐	☒	☐	☐ A ☒ B
Top	☒	☒	☐	☒	☐	☐ A ☒ B
Bottom	☒	☒	☐	☒	☐	☐ A ☒ B

Discharge To Horizontal Coupling Plane

Side of EUT	Test Levels			Results		
	± 2 kV	± 4 kV	± 6 kV	Passed	Fail	Performance Criterion
Front	☒	☒	☐	☒	☐	☐ A ☒ B
Back	☒	☒	☐	☒	☐	☐ A ☒ B
Left	☒	☒	☐	☒	☐	☐ A ☒ B
Right	☒	☒	☐	☒	☐	☐ A ☒ B

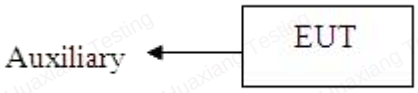
Discharge To Vertical Coupling Plane

Side of EUT	Test Levels			Results		
	± 2 kV	± 4 kV	± 6 kV	Passed	Fail	Performance Criterion
Front	☒	☒	☐	☒	☐	☐ A ☒ B
Back	☒	☒	☐	☒	☐	☐ A ☒ B
Left	☒	☒	☐	☒	☐	☐ A ☒ B
Right	☒	☒	☐	☒	☐	☐ A ☒ B

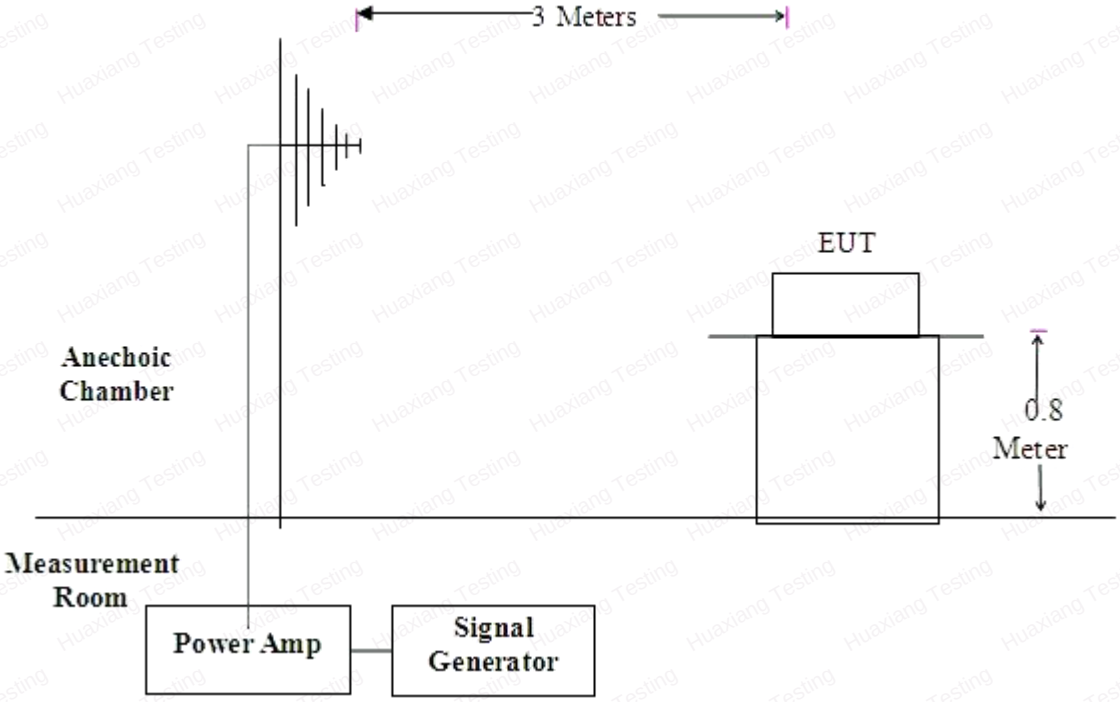
8. RF FIELD STRENGTH SUSCEPTIBILITY TEST

8.1.Block Diagram of Test

8.1.1.Block diagram of connection between the EUT and Load



8.1.2 .Block diagram of RS test setup



8.2.Test Standard

EN IEC 61000-6-1: 2019(EN61000-4-3:2006 +A1:2008+A2:2010 (Severity Level: 2, 3V / m)

8.3.Severity Levels and Performance Criterion

8.1.3 .Severity Levels

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

8.1.4 .Performance Criterion : **A**

8.4.EUT Configuration on Test

The configuration of the EUT is same as Section 3.3.

8.5.Operating Condition of EUT

Same as radiated emission measurement which is listed in Section 3.4, except the test setup replaced as Section 8.1.

8.6.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 are 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 camera is used to monitor its screen.

All the scanning conditions are as following:

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

8.7.Test Results

PASS

Please refer to the following page.

RF Field Strength Susceptibility Test Results

Applicant	:	Dongguan Turing Automation Technology Co., Ltd	Test Date	:	2024-06-28
EUT	:	Cable Cutting and Stripping Machine	Temperature	:	22℃
M/N	:	TR-880H	Humidity	:	50 %
Field Strength	:	3 V/m	Criterion	:	A
Power Supply	:	AC 110-220V, 50/60Hz,	Test Mode	:	Normal
Test Engineer	:	Mark	Frequency Range	:	80 MHz to1000 MHz

Modulation:	☐None	☐ Pulse	☑AM 1KHz 80%	

	Frequency Rang 1: 80~ 1000MHz			Frequency Rang 2: 1400~ 2000MHz		
Steps	1	/	%	#	/	%

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

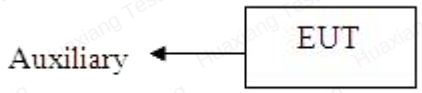
Test Equipment **:**
1. Signal Generator : 2031 (MARCONI)
2. Power Amplifier : 500A100 & 100W/1000M1 (A&R)
3. Power Antenna : 3108 (EMCO) & AT1080 (A&R)
4. Field Monitor : FM2000 (A&R)

Note:

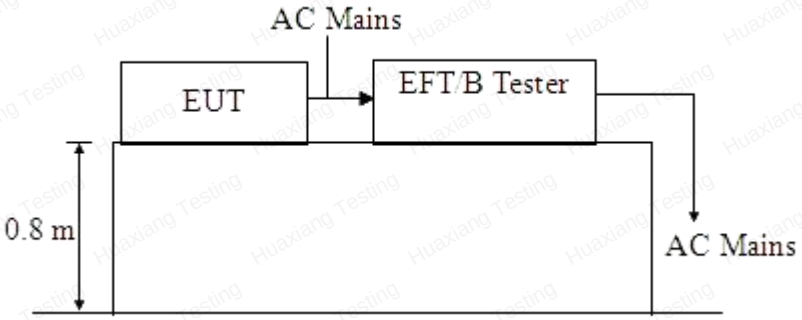
9. ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST

9.1.Block Diagram of Test Setup

9.1.1.Block Diagram of the EUT



9.1.2.EUT Test Setup



9.2.Test Standard

EN IEC 61000-6-1: 2019(EN61000-4-4:2004+A1:2010, Severity Level, Level 2**:** 1KV)

9.3.Severity Levels and Performance Criterion

9.3.1.Severity level

Open Circuit Output Test Voltage ±10%		
Level	On Power Supply Lines	On I/O (Input/Output) Signal data and control lines
1	0.5 KV	0.25 KV
2	1 KV	0.5 KV
3	2 KV	1 KV
4	4 KV	2 KV
X	Special	Special

9.3.2.Performance criterion **: B**

9.4.EUT Configuration

The configuration of EUT is listed in Section 3.3.

9.5.Operating Condition of EUT

9.5.1.Setup the EUT as shown in Section 9.1.

9.5.2.Turn on the power of all equipments.

9.5.3.Let the EUT work in test mode (Normal) and measure it.

9.6.Test Procedure

The EUT is put on the table which is 0.8 meter high above the ground. This reference ground plane shall project beyond the EUT by at least 0.1m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane beneath the EUT, shall be more than 0.5m.

9.6.1.For input and output AC power ports**:**

The EUT is connected to the power mains by using a coupling device which couples the ETR-880H interference signal to AC power lines. Both polarities of the test voltage should be applied during compliance test and the duration of the test is 2 mins.

9.6.2.For signal lines and control lines ports**:**

No I/O ports. It’s unnecessary to test.

9.6.3.For DC output line ports**:**

It’s unnecessary to test.

9.7.Test Result

PASS

Please reference to the following page

Electrical Fast Transient/Burst Test Results

Standard	☐ IEC 61000-4-4 ☑ EN 61000-4-4	Result : ☑ PASS / ☐ FAIL

Applicant : Dongguan Turing Automation Technology Co., Ltd

EUT : Cable Cutting and Stripping Machine M/N : TR-880H

Input Voltage: AC 110-220V, 50/60Hz,

Criterion : B

Ambient Condition : 20 ℃ 50% RH

Operation Mode : Normal

Line : ☑ AC Mains	Line : ☐ Signal line ☑ DC line
Coupling : ☑ Direct	Coupling : ☐ Capacitive
Test Time : 120s	

Line	Test Voltage	Result(+)	Result(-)
L	1KV	PASS	PASS
N	1KV	PASS	PASS
PE	1KV	PASS	PASS
L、N	1KV	PASS	PASS
L、PE	1KV	PASS	PASS
N、PE	1KV	PASS	PASS
L、N、PE	1KV	PASS	PASS

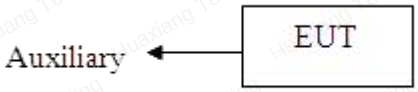
Note:

Test Equipment	Burst Tester Model : PETR-880H 4010

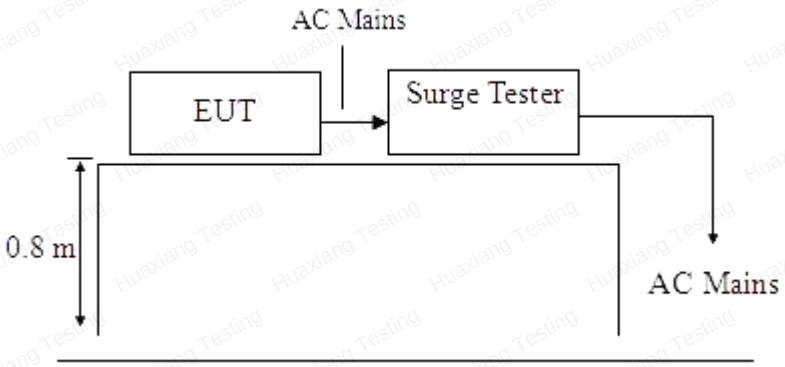
10.SURGE IMMUNITY TEST

10.1.Block Diagram of Test Setup

10.1.1.Block Diagram of the EUT



10.1.2.Surge Test Setup



10.2.Test Standard

EN IEC 61000-6-1: 2019(EN61000-4-5: 2006)

Severity Level**:** Line to Line: Level 2, 1.0KV

10.3.Severity Levels and Performance Criterion

10.3.1.Severity level

Severity Level	Open-Circuit Test Voltage KV
1	0.5
2	1.0
3	2.0
4	4.0
*	Special

10.3.2.Performance criterion **: B**

10.4.EUT Configuration

The configuration of EUT is listed in Section 3.3.

10.5.Operating Condition of EUT

10.5.1.Setup the EUT as shown in Section 10.1.

10.5.2.Turn on the power of all equipments.

10.5.3.Let the EUT work in test mode (Normal) and measure it.

10.6.Test Procedure

10.6.1.Set up the EUT and test generator as shown on Section 10.1.2.

10.6.2.For line to line coupling mode, provide a 1.0 KV 1.2/50us voltage surge (at open-circuit condition) and 8/20us current surge to EUT selected points.

10.6.3.At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are conducted during test.

10.6.4.Different phase angles are done individually.

10.6.5.Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

10.7.Test Result

PASS

Please reference to the following page

Surge Immunity Test Result

Applicant : Dongguan Turing Automation Technology Co., Ltd
EUT : Cable Cutting and Stripping Machine
M/N : TR-880H
Power Supply : AC 110-220V, 50/60Hz,
Test Engineer : Mark

Test Date : 2024-06-28
Temperature : 22℃
Humidity : 50%
Test Mode : Normal
Criterion : B

Location	Polarity	Phase Angle	Number of Pulse	Pulse Voltage (KV)	Result
L-N	+	0°	5	1.0	PASS
	+	90°	5	1.0	PASS
	+	180°	5	1.0	PASS
	+	270°	5	1.0	PASS
	-	0°	5	1.0	PASS
	-	90°	5	1.0	PASS
	-	180°	5	1.0	PASS
	-	270°	5	1.0	PASS
L-PE	+	0°	5	2.0	PASS
	+	90°	5	2.0	PASS
	+	180°	5	2.0	PASS
	+	270°	5	2.0	PASS
	-	0°	5	2.0	PASS
	-	90°	5	2.0	PASS
	-	180°	5	2.0	PASS
	-	270°	5	2.0	PASS
N-PE	+	0°	5	2.0	PASS
	+	90°	5	2.0	PASS
	+	180°	5	2.0	PASS
	+	270°	5	2.0	PASS
	-	0°	5	2.0	PASS
	-	90°	5	2.0	PASS
	-	180°	5	2.0	PASS
	-	270°	5	2.0	PASS

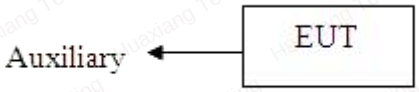
Remark:

Test Equipment :
Surge Tester Psurge4.1

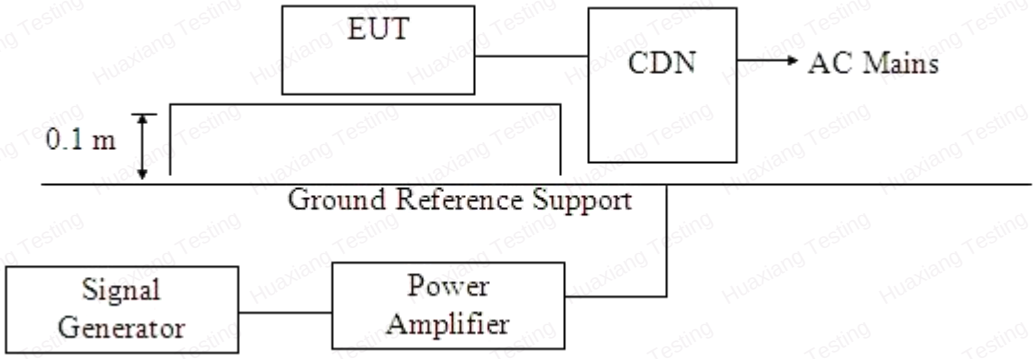
11. INJECTED CURRENTS SUSCEPTIBILITY TEST

11.1. Block Diagram of Test Setup

11.1.1. Block Diagram of the EUT



11.1.2. Block Diagram of Test Setup



11.2. Test Standard

EN IEC 61000-6-1: 2019 (EN61000-4-6: 2009, Severity Level: Level 2, 3V (rms), (0.15MHz ~ 80MHz)

11.3. Severity Levels and Performance Criterion

11.3.1. Severity level

Level	Field Strength V
1	1
2	3
3	10
X	Special

11.3.2.Performance criterion**: A**

11.4.EUT Configuration

The configuration of EUT is listed in Section 3.3.

11.5.Operating Condition of EUT

11.5.1.Setup the EUT as shown in Section 11.1.

11.5.2.Turn on the power of all equipments.

11.5.3.Let the EUT work in test mode (Normal) and measure it.

11.6.Test Procedure

11.6.1.Set up the EUT, CDN and test generators as shown on Section 11.1.2.

11.6.2.Let the EUT work in test mode and measure it.

11.6.3.The EUT are placed on an insulating support 0.1m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane about 0.3m from EUT. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 30 and 50 mm (where possible).

11.6.4.The disturbance signal described below is injected to EUT through CDN.

11.6.5.The EUT operates within its operational mode(s) under intended climatic conditions after power on.

11.6.6.The frequency range is swept from 150KHz to80MHz using 3V signal level, and with the disturbance signal 80% amplitude modulated with a 1KHz sine wave.

11.6.7.The rate of sweep shall not exceed $1.5*10^{-3}$decades/s. Where the frequency is swept incrementally, the step size shall not exceed 1% of the start and thereafter 1% of the preceding frequency value.

11.6.8.Recording the EUT operating situation during compliance teN/A and decide the EUT immunity criterion.

11.7.Test Results

PASS

Please reference to the following page

Injected Currents Susceptibility Test Results

Applicant : Dongguan Turing Automation Technology Co., Ltd EUT : Cable Cutting and Stripping Machine M/N : TR-880H Power Supply : AC 110-220V, 50/60Hz, Test Engineer : Mark	Test Date: 2024-06-28 Temperature : 22℃ Humidity : 58%

Test Mode : Normal

Frequency Range (MHz)	Injected Position	Strength (Unmodulated)	Criterion	Result
0.15 ~ 80	AC Input	3V	A	PASS

Test Mode :

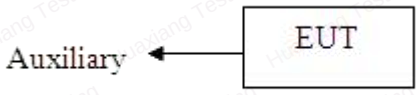
Frequency Range (MHz)	Injected Position	Strength (Unmodulated)	Criterion	Result

Remark : 1. Modulation Signal:1KHz 80% AM Measurement Equipment : Simulator: CWS 500 (SWITZERLAND EMTEST) CDN : ☑CDN-M2 (SWITZERLAND EMTEST) ☑CDN-M3 (SWITZERLAND EMTEST)	Note:

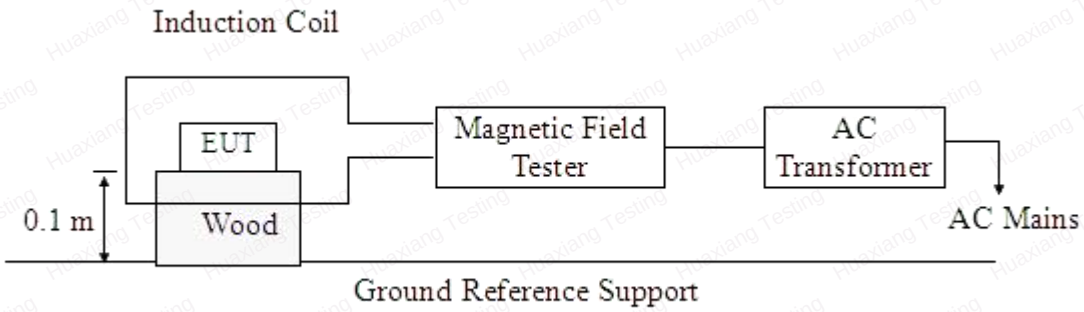
12. MAGNETIC FIELD SUSCEPTIBILITY TEST

12.1. Block Diagram of Test

12.1.1. Block diagram of test setup



12.1.2. Magnetic field test setup



12.2. Test Standard

EN IEC 61000-6-1: 2019 (EN61000-4-8: 2010, Severity Level: Level 1, 1A / m)

12.3. Severity Levels and Performance Criterion

12.3.1. Severity Levels

Level	Field Strength A/m
1	1
2	3
3	10
4	30
5	100
X	Special

12.3.2. Performance Criterion : **A**

12.4. EUT Configuration on Test

The configuration of the EUT is same as Section 3.3.

12.5.Test Procedure

The EUT is placed in the middle of a induction coil (1*1m), under which is a 1*1*0.1m (high) table, this small table is also placed on a larger table,0.8 m above the ground. Both horizontal and vertical polarization of the induction coil are set on test, so that each side of the EUT is affected by the magnetic field. Also can reach the same aim by change the position of the EUT.

12.6.Test Results

PASS

Please reference to the following page

Magnetic Field Immunity Test Result

Standard	☐ IEC 61000-4-8 ☑ EN 61000-4-8	Result: ☑ Pass / ☐ Fail

Applicant : Dongguan Turing Automation Technology Co., Ltd

EUT : Cable Cutting and Stripping Machine M/N: TR-880H

Input Voltage : AC 110-220V, 50/60Hz,

Date of Test : 2024-06-28 Test Engineer: Mark

Ambient Condition : Temp : 22℃ Humid: 58%

Criterion: A

Operation Mode : Normal

Test Level (A/M)	TeN/A Duration	Coil Orientation	Criterion	Result
3	5 mins	X	A	PASS
3	5 mins	Y	A	PASS
3	5 mins	Z	A	PASS

Operation Mode :

Test Level (A/M)	TeN/A Duration	Coil Orientation	Criterion	Result

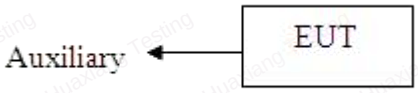
Test Equipment	Magnetic Field Test: HEAFELY MAG 100.1

Note:

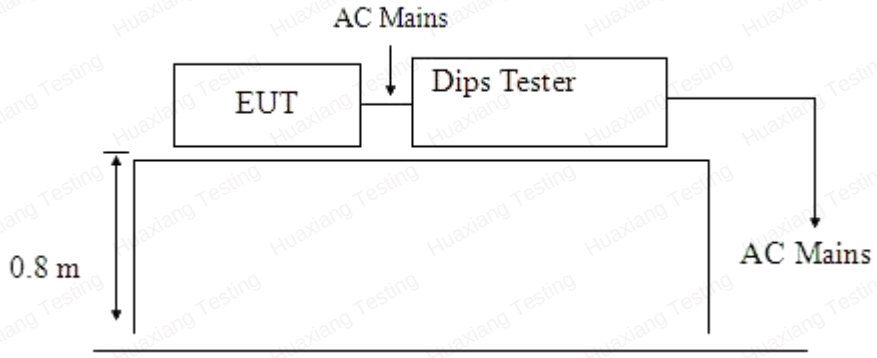
13. VOLTAGE DIPS AND INTERRUPTIONS TEST

13.1. Block Diagram of Test Setup

13.1.1. Block Diagram of the EUT



13.1.2. Dips Test Setup



13.2. Test Standard

EN IEC 61000-6-1: 2019(EN61000-4-11: 2004)

13.3. Severity Levels and Performance Criterion

13.3.1. Severity level

Test Level %UT	Voltage dip and short interruptions %UT	Duration (in period)
0	100	0.5 1 5 10 25 50 *
40	60	
70	30	

13.3.2.Performance criterion **: B&C**

13.4.EUT Configuration

The configuration of EUT is listed in Section 3.3.

13.5.Operating Condition of EUT

13.5.1 Setup the EUT as shown in Section 13.1.

13.5.2 Turn on the power of all equipments.

13.5.3 Let the EUT work in test mode (Normal) and measure it.

13.6.Test Procedure

13.6.1.Set up the EUT and test generator as shown on Section 13.1.2.

13.6.2.The interruptions is introduced at selected phase angles with specified duration.

13.6.3.Record any degradation of performance.

13.7.Test Result

PASS

Please reference to the following page

Voltage Dips And Interruptions Test Results

Applicant : Dongguan Turing Automation Technology Co., Ltd EUT : Cable Cutting and Stripping Machine M/N : TR-880H Power Supply : AC 110-220V, 50/60Hz,	Test Date : 2024-06-28 Temperature : 22℃ Humidity : 50% Test Engineer : Mark

Test Mode: Normal

Test Level % U_T	Voltage Dips & Short Interruptions % U_T	Duration (in periods)	Criterion ☐A ☑B ☑C ☐D	Result P=PASS F=Fail
0	100	250P	C	P
70	30	25P	C	P
0	100	1P	B	P
0	100	0.5P	B	P

Test Mode :

Test Level % U_T	Voltage Dips & Short Interruptions % U_T	Duration (in periods)	Criterion ☐A ☐B ☐C ☐D	Result P=PASS F=FAIL

Note:

APPENDIX I
(Photos of EUT)

FIGURE
GENERAL APPEARANCE OF EUT

Figure-1

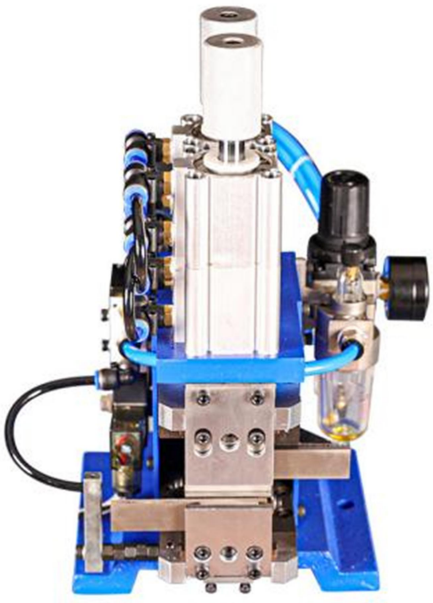


Figure-2

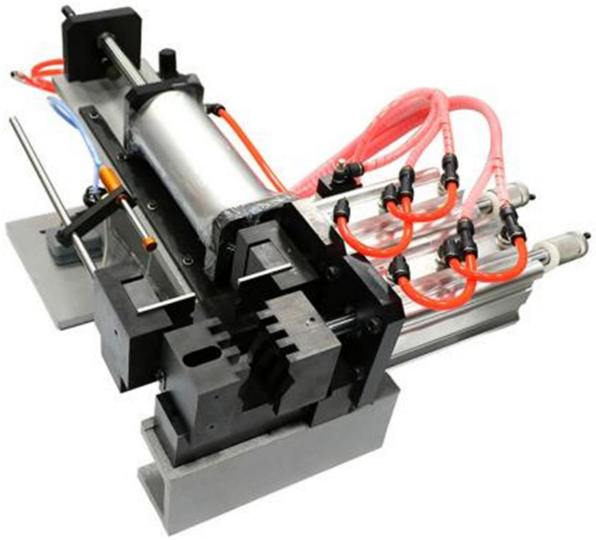


Figure-3

Figure-4

Figure-5

Figure-6

Figure-7

Figure-8

Figure-9

Figure-10

Figure-11

Figure-12

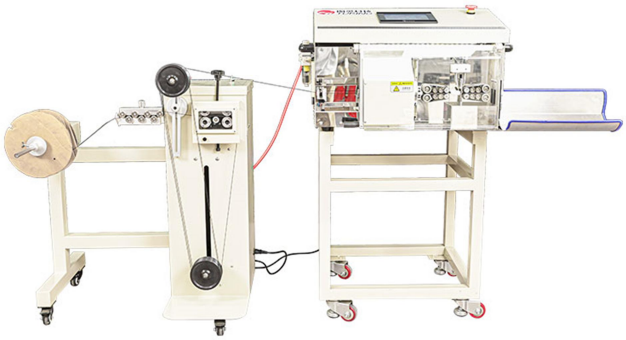


Figure-13

*****************************THE END OF REPORT****************************