

Report No.: TW2311009E

Applicant: Shenzhen JianYi KeJi Youxian Gongsi

Product: Ground loop Noise Isolator

Trademark: BESIGN

Model No.: GLNI01

Test Standards: FCC Part 15 Subpart B

Test Result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.4&FCC Part 15 regulations

for the evaluation of electromagnetic compatibility

Approved By

Terry Tang

Manager

Dated: November 29, 2023

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TESTING LABORATORIES.

Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China

Tel (755) 83448688 Fax (755) 83442996 Email: info@timeway-lab.com

Report No.: TW2311009E Page 2 of 20

Date: 2023-11-29



Special Statement:

FCC-Registration No.: 744189

The 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 No.: 744189.

Industry Canada (IC) — Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

A2LA (Certification Number:5013.01)

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

CAB identifier: CN0033

Report No.: TW2311009E

Date: 2023-11-29



Content

1.0	Ger	neral Details	4
	1.1	Test Lab Details	4
	1.2	Applicant Details	4
	1.3	Description of EUT	4
	1.4	Submitted Sample	4
	1.5	Test Duration	4
	1.6	Test Uncertainty	4
	1.7	Test Engineer	4
2.0	List	t of Measurement Equipment	5
	2.1	Conducted Emission Test.	5
	2.2	Radiated electromagnetic disturbance test	5
	2.3	Auxiliary Equipment	5
3.0	Tec	hnical Details	6
	3.1	Investigations Requested	6
	3.2	Test Standards	6
4.0	Cor	nducted Power line Test	7
	4.1	Schematics of the test	7
	4.2	Test Method and test Procedure	7
	4.3	Power line conducted Emission Limit	7
	4.4	Test Results	7
5.0	Rac	liated Disturbance Test	10
	5.1	Schematics of the test	10
	5.2	Test Method and test Procedure	10
	5.3	Radiated Emission Limit	10
	5.4	Test result	10
6.0	FC	C Label	13
7.0	Pho	oto of testing	14

Date: 2023-11-29



1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le

Village, Nanshan District, Shenzhen, China

Telephone: (755) 83448688 Fax: (755) 83442996

1.2 Applicant Details

Applicant: Shenzhen JianYi KeJi Youxian Gongsi

Address: Rm401, Unit 1, B1 Bulding, Bqu, Jinhuhuayuan, Jinhu Road, Qingshuihejiedao, Luohu

District, Shenzhen 518024, China

Telephone: 13715368860

Fax: -- 1.3 Description of EUT

Product: Ground loop Noise Isolator

Manufacturer: Shenzhen Jian Yi Ke Ji Youxian Gongsi

Address: Rm401, Unit 1, B1 Bulding, Bqu, Jinhuhuayuan, Jinhu Road, Qingshuihejiedao, Luohu

District, Shenzhen 518024, China

Trademark: BESIGN
Basic Model GLNI01
Additional Model: N/A

Rating: Input: DC5V

Internal Highest Frequency: up to 20kHz

1.4 Submitted Sample: 2 Samples

1.5 Test Duration

Date of Receipt of Application: November 02, 2023 Date of Test: November 02, 2023 ~ November 29, 2023

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB Radiated Emissions Uncertainty =4.7dB

1.7 Test Engineer

The sample tested by

fes. Lan

Print Name: Leo Lau

"The report refers only to the sample tested and does not apply to the bulk production.

This report is issued in confidential to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for illegal purpose. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES reserves the rights to withdraw it and to adopt any other remedies which may be appropriate."

Report No.: TW2311009E Page 5 of 20

Date: 2023-11-29



2.0 List of Measurement Equipment

2.1 Conducted Emission Test

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESCS 30	834115/006	RS	2023.07.14	1Year
LISN	NNB42	00012	SCHAFFNER	2023.07.14	1Year

2.2 Radiated electromagnetic disturbance test

				Calibration	Calibration
Name	Model No	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESPI 3	100379	RS	2023.07.14	1Year
Spectrum Analyzer	E4407B	MY50441392	HP/Agilent	2023.07.14	1Year
Amplifier	BBV9743	#218	HP/Agilent	2023.07.14	1Year
Bilog Antenna	VULB9163	9163/340	Schwarebeck	2022.07.18	3Year
Horn Antenna	BBHA 9120D	9120D-631	RS	2022.07.18	3Year
Amplifier	8449B	3008A00160	HP/Agilent	2023.07.14	1Year

2.3 Auxiliary Equipment

Device	Manufacturer	Model	Rating
PC	ThinkPad	R4	DC19V, 2.31A
Wireless Car Kit	Shenzhen JianYi	BK01	DC5V, 0.5A
	KeJi Youxian		
	Gongsi		

Report No.: TW2311009E Page 6 of 20

Date: 2023-11-29



3.0 Technical Details

3.1 Investigations Requested

Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

3.2 Test Standards

FCC Part 15 Subpart B

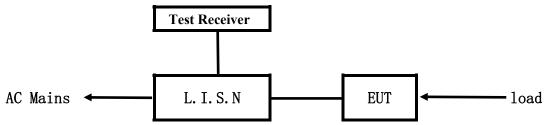
Report No.: TW2311009E

Date: 2023-11-29



4.0 Conducted Power line Test

4.1 Schematics of the test

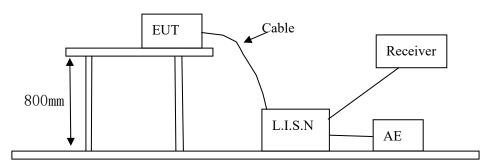


EUT: Equipment Under Test

4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014. The Frequency spectrum from 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2014. Cables and peripherals were moved to find the maximum emission levels for each frequency.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



4.3 Power line conducted Emission Limit

Frequency	Class A Lin	nits dB(µV)	Class B Limits dB(µV)		
(MHz)	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level	
$0.15 \sim 0.50$	79.00	66.00	66.00~56.00*	56.00~46.00*	
$0.50 \sim 5.00$	73.00	60.00	56.00	46.00	
$5.00 \sim 30.00$	73.00	60.00	60.00	50.00	

Notes:

- 1. *decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

4.4 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

This report is issued in confidential to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for illegal purpose. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES reserves the rights to withdraw it and to adopt any other remedies which may be appropriate."

[&]quot;The report refers only to the sample tested and does not apply to the bulk production.

Date: 2023-11-29



A: Disturbance Voltage Limits at mains on Live terminals (150kHz to 30MHz)

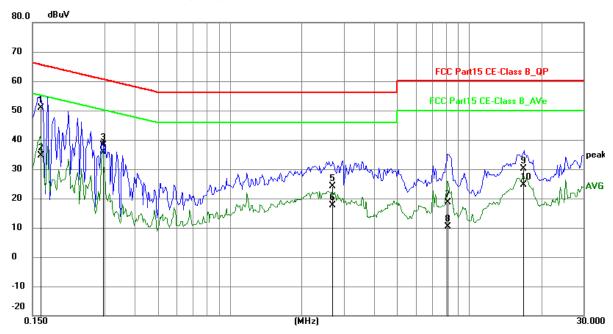
EUT Operating Environment

Temperature: 25°C Humidity:75%RH Atmospheric Pressure: 101 kPa

EUT set Condition: Working Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1624	41.07	9.78	50.85	65.34	-14.49	QP	Р
2	0.1624	24.83	9.78	34.61	55.34	-20.73	AVG	Р
3	0.2955	28.31	9.76	38.07	60.37	-22.30	QP	Р
4	0.2955	26.15	9.76	35.91	50.37	-14.46	AVG	Р
5	2.6783	14.31	9.83	24.14	56.00	-31.86	QP	Р
6	2.6783	7.73	9.83	17.56	46.00	-28.44	AVG	Р
7	8.1483	8.64	10.07	18.71	60.00	-41.29	QP	Р
8	8.1483	0.39	10.07	10.46	50.00	-39.54	AVG	Р
9	16.8387	19.54	10.49	30.03	60.00	-29.97	QP	Р
10	16.8387	14.22	10.49	24.71	50.00	-25.29	AVG	Р

[&]quot;The report refers only to the sample tested and does not apply to the bulk production.

Date: 2023-11-29



B: Disturbance Voltage Limits at mains on Neutral terminals (150kHz to 30MHz)

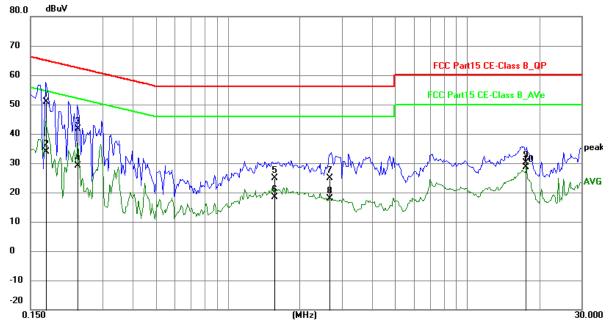
EUT Operating Environment

Temperature: 25°C Humidity:75%RH Atmospheric Pressure: 101 kPa

EUT set Condition: Working Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1734	41.23	9.77	51.00	64.80	-13.80	QP	Р
2	0.1734	23.99	9.77	33.76	54.80	-21.04	AVG	Р
3	0.2358	31.98	9.75	41.73	62.24	-20.51	QP	Р
4	0.2358	19.48	9.75	29.23	52.24	-23.01	AVG	Р
5	1.5601	15.10	9.80	24.90	56.00	-31.10	QP	Р
6	1.5601	8.68	9.80	18.48	46.00	-27.52	AVG	Р
7	2.6641	15.03	9.83	24.86	56.00	-31.14	Q Q	Р
8	2.6641	8.12	9.83	17.95	46.00	-28.05	AVG	Р
9	17.5677	19.52	10.53	30.05	60.00	-29.95	QP	Р
10	17.5677	17.99	10.53	28.52	50.00	-21.48	AVG	Р

[&]quot;The report refers only to the sample tested and does not apply to the bulk production.

Page 10 of 20

Report No.: TW2311009E

Date: 2023-11-29



5.0 Radiated Disturbance Test

5.1 Schematics of the test

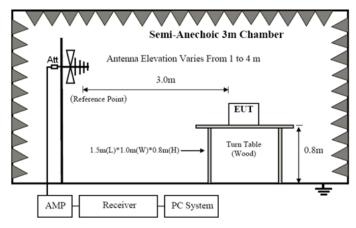


5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4 –2014, The frequency spectrum from 30MHz to 1GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. Measurements were made at 3 meters.

Test Voltage: DC5V

Block diagram of Test setup



5.3 Radiated Emission Limit

Frequency Range (MHz)	Distance (m)	Field strength (dB μ V/m)
30-88	3	40.00
88-216	3	43.50
216-960	3	46.00
Above 960	3	54.00

Note: The lower limit shall apply at the transition frequencies

5.4 Test result

Pass

[&]quot;The report refers only to the sample tested and does not apply to the bulk production.

Report No.: TW2311009E Page 11 of 20

Date: 2023-11-29



A: Radiated Disturbance (30MHz----1000MHz)

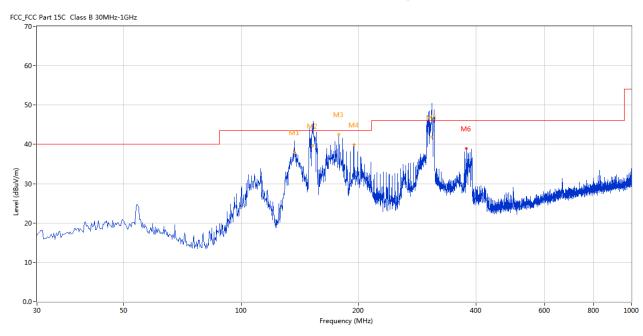
Project Number: CASE3 Test Time: 2023-11-15_09.23.52

EUT Name: Ground loop Noise Isolator Test Engineer: STEPHEN

Manufacturer: Shenzhen JianYi KeJi Youxian Gongsi Test Standard: FCC Part 15B

Model: GLNI01 Work Addition: Working

Temp.($^{\circ}$ C): 25 Load: Hum.: 65% Charger:



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1*	137.213	38.01	-17.21	43.5	5.49	QP	2.00	160	Horizontal	Pass
2*	152.797	39.67	-16.87	43.5	3.83	QP	327.00	195	Horizontal	Pass
3*	178.176	42.51	-15.51	43.5	0.99	QP	335.00	119	Horizontal	Pass
4*	194.558	39.87	-13.82	43.5	3.63	QP	337.00	176	Horizontal	Pass
5*	308.524	41.93	-10.90	46.0	4.07	QP	41.00	100	Horizontal	Pass
6	377.901	38.95	-9.34	46.0	7.05	Peak	126.00	100	Horizontal	Pass

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES reserves the rights to withdraw it and to adopt any other remedies which may be appropriate."

[&]quot;The report refers only to the sample tested and does not apply to the bulk production.

This report is issued in confidential to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for illegal purpose. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No.: TW2311009E Page 12 of 20

Date: 2023-11-29



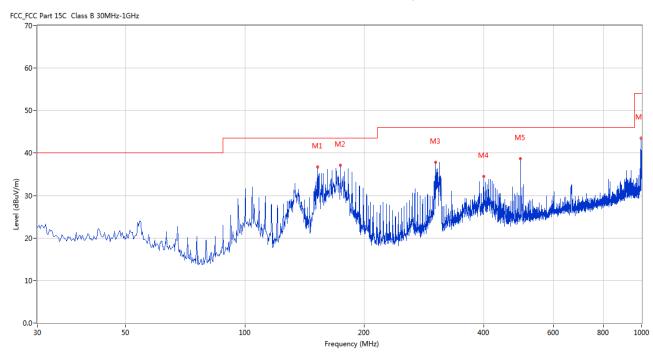
Radiated Disturbance (30MHz----1000MHz) B:

Test Time: 2023-11-15 09.12.11 Project Number: CASE3

EUT Name: Ground loop Noise Isolator Test Engineer: **STEPHEN** FCC Part 15B Manufacturer: Shenzhen JianYi KeJi Youxian Gongsi Test Standard:

Model: GLNI01 Work Addition: Working

25 Load: Temp.(°C): 65% Charger: Hum.:



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	152.674	36.67	-16.88	43.5	6.83	Peak	273.00	100	Vertical	Pass
2	174.009	37.08	-15.87	43.5	6.42	Peak	358.00	100	Vertical	Pass
3	302.987	37.88	-10.98	46.0	8.12	Peak	30.00	100	Vertical	Pass
4	399.963	34.46	-8.57	46.0	11.54	Peak	326.00	100	Vertical	Pass
5	494.271	38.68	-7.12	46.0	7.32	Peak	336.00	100	Vertical	Pass
6	995.394	43.51	-1.26	54.0	10.49	Peak	329.00	100	Vertical	Pass

[&]quot;The report refers only to the sample tested and does not apply to the bulk production.

Report No.: TW2311009E Page 13 of 20

Date: 2023-11-29



6.0 FCC Label

FCC ID: 2A2IXGLNI01

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location: On the product body

Report No.: TW2311009E Page 14 of 20

Date: 2023-11-29



7.0 Photo of testing

Conducted Emissions

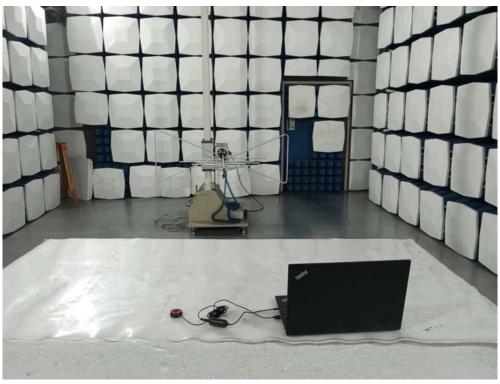


Report No.: TW2311009E Page 15 of 20

Date: 2023-11-29



Radiated Emissions



Page 16 of 20

Report No.: TW2311009E

Date: 2023-11-29



Photographs – EUT



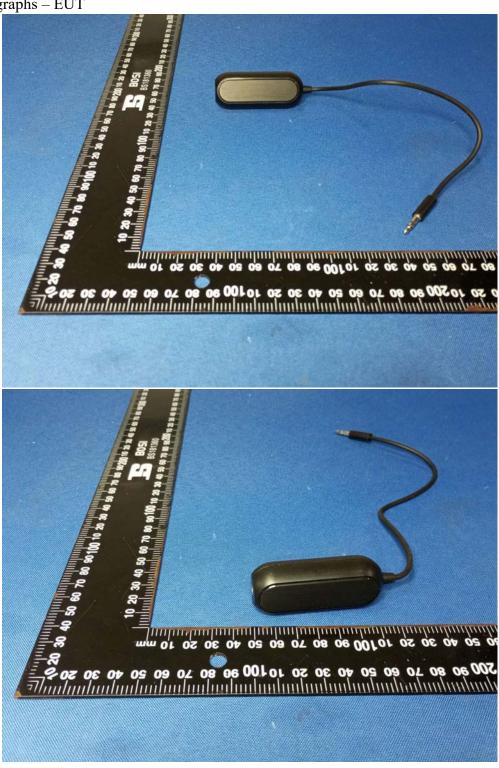
Page 17 of 20

Report No.: TW2311009E

Date: 2023-11-29



Photographs – EUT



"The report refers only to the sample tested and does not apply to the bulk production.

This report is issued in confidential to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for illegal purpose. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES reserves the rights to withdraw it and to adopt any other remedies which may be appreciate."

adopt any other remedies which may be appropriate."

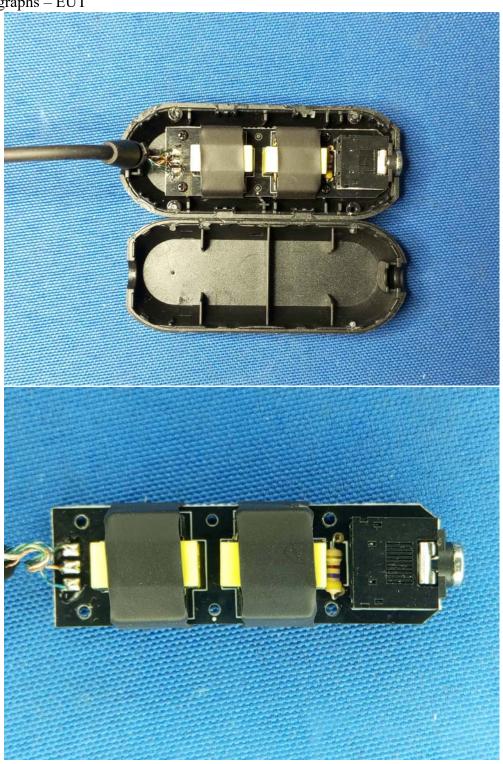
Page 18 of 20

Report No.: TW2311009E

Date: 2023-11-29



Photographs – EUT



"The report refers only to the sample tested and does not apply to the bulk production.

This report is issued in confidential to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for illegal purpose. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES reserves the rights to withdraw it and to adopt any other remedies which may be appropriate."

adopt any other remedies which may be appropriate."

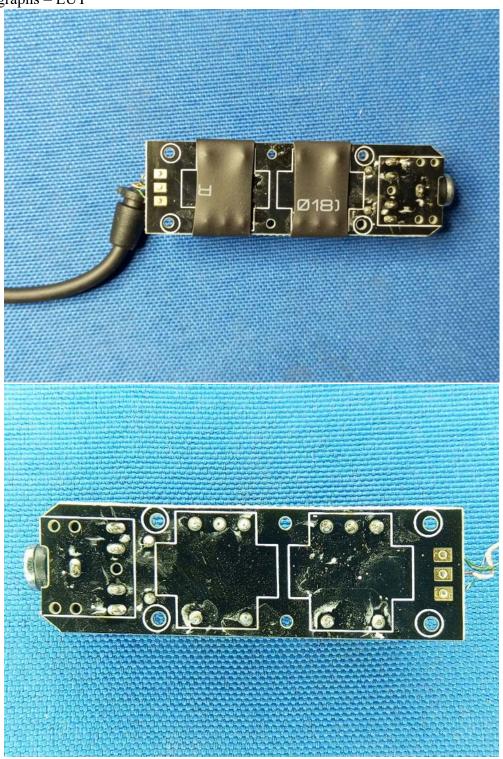
Page 19 of 20

Report No.: TW2311009E

Date: 2023-11-29



Photographs – EUT

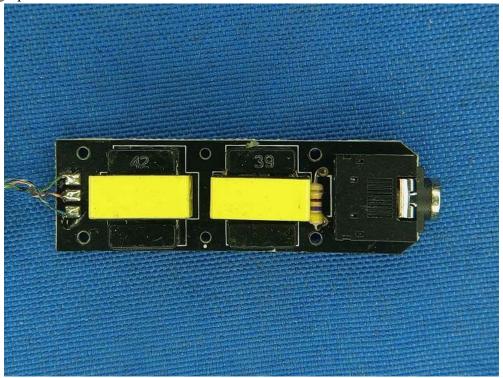


Report No.: TW2311009E Page 20 of 20

Date: 2023-11-29



Photographs – EUT



-- End of the Report--