

Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021

Applicant : ZHEJIANG IWALK TECHNOLOGY CO., LTD.

Address : NO. 59 JUXING TECHNOLOGY PARK, JIAOJIANG DISTRICT, TAIZHOU

CITY, ZHEJIANG, PROVINCE

Sample Name : KS1 scooter

Tested Model : KS1

Sample Receiving date: : 2021-01-18

Test period : 2021-01-18---2021-02-03

Test Requirement : The Restriction of the Use of Certain Hazardous Substances in Electrical

and Electronic Equipment, RoHS Directive 2011/65/EU and its amendment

Directive (EU) 2015/863.

Test Method : Please refer to next page(s).
Test result : Please refer to next page(s).
Conclusion : Please refer to next page(s).

Note : The test results are related only to the tested items.

For and on behalf of

hanghai Global Testing Services Co., Ltd.

Authorized Signature

Shi Lei/Kevin

General Manger -GTS/SHO

Page 1 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date:** February 03, 2021

A. Pb, Cd, Cr(VI), Hg, PBBs&PBDEs

Test Method:

- 1. Disassembly, disjointment and mechanical sample preparation
 - -Ref. to IEC 62321-2: 2013, Disassembly, disjointment and mechanical sample preparation.
- 2. With reference to IEC 62321-1: 2013, tests were performed for the samples indicated by the photos in this report.
- (1) Screening Lead, mercury, cadmium, total chromium and total bromine
 - Ref. to IEC 62321-3-1: 2013, Screening for Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry.
- (2) Wet chemical test method
 - a. Total Lead, Cadmium, Chromium and Mercury content
- Ref. to IEC 62321-4: 2013+AMD1:2017, determination of Mercury in polymers, metals and electronics by ICP-OES.
 - —Ref. to IEC 62321-5: 2013, determination of Cadmium, lead and chromium in polymers and electronics and cadmium and lead in metals by ICP-OES.
 - b. Chromium (VI) content
 - —For Colourless and coloured corrosion-protected coatings on metals, Ref. to IEC 62321-7-1: 2015, determination of presence of hexavalent chromium (Cr(VI)) in colourless and coloured corrosion-protected coatings on metals by the colorimetric method.
 - For polymers and electronics, Ref. to IEC 62321-7-2: 2017, determination of hexavalent chromium (Cr(VI)) in polymers and electronics by the colorimetric method.
 - c. PBBs, PBDEs
 - —Ref. to IEC 62321-6: 2015, determination of polybrominated biphenyls and polybrominated diphenyl ethers in polymers by gas chromatograhy -mass spectrometry (GC-MS).



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021

Test result(s):

Part	Part Description		Resu	ilts of E	DXRF		Chemical confirmation	Conclusion
No.	Part Description	Pb	Cd	Hg	Cr	Br	results (mg/kg)	Conclusion
1	Body shell	BL	BL	BL	IN		CrVI: Negative	Pass
2	Car stud	17 (BL)	BL	BL	IN		CrVI: Negative	Pass
3	Horizontal	36 (BL)	BL	BL	IN		CrVI: Negative	Pass
4	Pedal	BL	BL	BL	BL	BL		Pass
5	Body connectors	28 (BL)	BL	BL	IN		CrVI: Negative	Pass
6	Pedal fastener	BL	BL	BL	IN		CrVI: Negative	Pass
7	Car pole connector	86 (BL)	BL	BL	IN		CrVI: Negative	Pass
8	Tire	32 (BL)	BL	BL	BL	BL		Pass
9	Round sleeve for vertical rod connectors	35 (BL)	BL	BL	IN		CrVI: Negative	Pass
10	Screw cap	99 (BL)	BL	BL	IN		CrVI: Negative	Pass
11	Ring gasket 1	48 (BL)	BL	BL	IN		CrVI: Negative	Pass
12	Ring gasket 2	114 (BL)	BL	BL	IN		CrVI: Negative	Pass
13	Ring gasket 3	BL	BL	BL	BL	BL		Pass
14	Shaft sleeve	202 (BL)	BL	BL	IN		CrVI: Negative	Pass
15	Snap ring	26 (BL)	BL	BL	IN		CrVI: Negative	Pass
16	Motor shell	471 (BL)	BL	BL	BL			Pass
17	Rear fender	BL	BL	BL	BL	BL		Pass
18	Set of	BL	BL	BL	BL	BL		Pass

Page 3 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021

Part	Part Description		Resu	ılts of E	OXRF		Chemical confirmation	Conclusion
No.	Part Description	Pb	Cd	Hg	Cr	Br	results (mg/kg)	Conclusion
19	Black plastic sleeve	BL	BL	BL	BL	BL		Pass
20	Bell hand pick	34 (BL)	BL	BL	BL	IN	PBBs: N.D. PBDEs: 110	Pass
21	Bell metal shell	31 (BL)	BL	BL	IN		CrVI: Negative	Pass
22	Retainer ring	BL	BL	BL	BL	BL		Pass
23	Bell base	39 (BL)	BL	BL	BL	IN	PBBs: N.D. PBDEs: 206	Pass
24	Side lamp shell	BL	BL	BL	BL	BL		Pass
25	Side lamp under base	BL	BL	BL	BL	BL		Pass
26	Side lamp on base	BL	BL	BL	BL	BL		Pass
27	Metal mesh	28 (BL)	BL	BL	IN		CrVI: Negative	Pass
28	Screw	196 (BL)	BL	BL	IN		CrVI: Negative	Pass
29	Top piece	86 (BL)	BL	BL	IN		CrVI: Negative	Pass
30	Spring 1	132 (BL)	BL	BL	IN		CrVI: Negative	Pass
31	Spring 2	132 (BL)	BL	BL	IN		CrVI: Negative	Pass
32	Fixed set of	44 (BL)	BL	BL	IN		CrVI: Negative	Pass
33	Black metal card (base material silver)	IN	10 (BL)	BL	IN		Pb: 289 CrVI: Negative	Pass
34	Red Metal Card (Silver Base)	38 (BL)	BL	BL	BL			Pass
35	Nut	115 (BL)	BL	BL	IN		CrVI: Negative	Pass
36	Black metal buckle	121 (BL)	BL	BL	IN		CrVI: Negative	Pass
37	Pear-shaped metal ring	BL	BL	BL	IN		CrVI: Negative	Pass

Page 4 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021

Part	Dort Description		Resu	ılts of E	OXRF		Chemical confirmation	Conclusion
No.	Part Description	Pb	Cd	Hg	Cr	Br	results (mg/kg)	Conclusion
38	Bridging metal blocks	BL	BL	BL	IN		CrVI: Negative	Pass
39	Metal card	16 (BL)	BL	BL	IN		CrVI: Negative	Pass
40	Connecting shaft	190 (BL)	BL	BL	IN		CrVI: Negative	Pass
41	Screw head	BL	BL	BL	BL			Pass
42	Hand drawn	22 (BL)	BL	BL	IN		CrVI: Negative	Pass
43	Metal shaft	126 (BL)	BL	BL	IN		CrVI: Negative	Pass
44	Block	220 (BL)	BL	BL	IN		CrVI: Negative	Pass
45	Switch block	BL	BL	BL	BL	BL		Pass
46	Plastic cover	BL	BL	BL	BL	BL		Pass
47	Plastic sheet	BL	BL	BL	BL	BL		Pass
48	Brake	27 (BL)	BL	BL	IN		CrVI: Negative	Pass
49	Brake handle base	379 (BL)	BL	BL	BL			Pass
50	Handlebar fixing plate	49 (BL)	BL	BL	BL			Pass
51	Torsional spring	165 (BL)	BL	BL	IN		CrVI: Negative	Pass
53	Nut	BL	BL	BL	IN		CrVI: Negative	Pass
54	Bolt	158 (BL)	BL	BL	IN		CrVI: Negative	Pass
55	Connecting shaft	BL	BL	BL	IN		CrVI: Negative	Pass
56	Brake handle pad	BL	BL	BL	BL	BL		Pass
57	Parking bracket spindle	BL	BL	BL	IN		CrVI: Negative	Pass
58	Connecting shaft	BL	BL	BL	IN		CrVI: Negative	Pass
59	Parking bracket support block	BL	BL	BL	BL	BL		Pass
60	Metal	428	BL	BL	IN		CrVI: Negative	Pass

Page 5 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021

Part	Part Description		Resu	lts of E	OXRF		Chemical confirmation	Conclusion
No.	Part Description	Pb	Cd	Hg	Cr	Br	results (mg/kg)	Conclusion
		(BL)						
61	Plastic parts	BL	BL	BL	BL	BL		Pass
62	Silvery spring	BL	BL	BL	IN		CrVI: Negative	Pass
63	Springback of	23 (BL)	BL	BL	IN		CrVI: Negative	Pass
64	Metal wrench	IN	13 (BL)	BL	IN		Pb: 376 CrVI: Negative	Pass
65	Metal shaft	BL	BL	BL	IN		CrVI: Negative	Pass
66	Spring	BL	BL	BL	IN		CrVI: Negative	Pass
67	Plastic gasket	BL	BL	BL	BL	BL		Pass
68	Plastic side patch	BL	BL	BL	BL	BL		Pass
69	Big nut	BL	BL	BL	IN		CrVI: Negative	Pass
70	Brake housing	BL	BL	BL	IN		CrVI: Negative	Pass
71	Silvery metal trough	106 (BL)	BL	BL	IN		CrVI: Negative	Pass
72	Rotable sheet metal	BL	BL	BL	IN		CrVI: Negative	Pass
74	Metal clip	110 (BL)	BL	BL	IN		CrVI: Negative	Pass
75	Spring	194 (BL)	BL	BL	IN		CrVI: Negative	Pass
76	Friction layer	384 (BL)	BL	BL	IN	BL	CrVI: N.D.	Pass
77	Metal plate	394 (BL)	BL	BL	IN		CrVI: Negative	Pass
78	Metal retaining ring	17 (BL)	BL	BL	IN		CrVI: Negative	Pass
79	Plastic cover	BL	BL	BL	BL	BL		Pass
80	Rotating groove	BL	BL	BL	BL	BL		Pass
81	Manual knob	BL	BL	BL	BL	BL		Pass
82	Spring	124 (BL)	BL	BL	IN		CrVI: Negative	Pass
83	Controller housing	BL	BL	BL	BL			Pass

Page 6 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021

Part	Part Description		Resu	Its of E	DXRF	Γ	Chemical confirmation	Conclusion
No.	·	Pb	Cd	Hg	Cr	Br	results (mg/kg)	
84	Black line pipe	BL	BL	BL	BL	BL		Pass
85	Green line skin	BL	BL	BL	BL	BL		Pass
86	The red leather	BL	BL	BL	BL	BL		Pass
87	Yellow line skin	BL	BL	BL	BL	BL		Pass
88	Black skin	BL	BL	BL	BL	BL		Pass
89	Blue line skin	BL	BL	BL	BL	BL		Pass
90	Silvery wire core	BL	BL	BL	BL			Pass
91	Green line set	BL	BL	BL	BL	BL		Pass
92	Yellow line set	BL	BL	BL	BL	BL		Pass
93	Blue line set	BL	14 (BL)	BL	BL	BL		Pass
94	Transparent line velum	BL	BL	BL	BL	BL		Pass
95	Black heat-shrinkable tube	BL	BL	BL	BL	BL		Pass
96	Black line pipe	BL	BL	BL	BL	BL		Pass
97	Black pipe sleeve	BL	BL	BL	BL	BL		Pass
98	Metal sheath	118 (BL)	BL	BL	IN		CrVI: Negative	Pass
100	Soldering tin (on green PCB board)	BL	BL	BL	BL			Pass



Report No. GTS2101180019EN **Job No.**:28837 **Date:** February 03, 2021

Remark:

- (^1) "---"= Not Applicable;
- (^2) (a) It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr(VI).
 - (b) The XRF screening test for RoHS elements-The reading may be different to the actual content in the sample be of non-uniformity composition.
 - (c) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Pb, Cd, Hg), UV-VIS for Cr(VI) and GC/MSD (for PBBs/PBDEs) is recommended to be performed if the concentration exceeds the below warming value according to IEC 62321-3-1: 2013.

Attached table 1, XRF screening limits in mg/kg for regulated elements in various matrices:

Element	Polymer Materials	Metallic Materials	Electronics
Cd	BL≤(70-3σ)< X	BL≤(70-3σ)< X	LOD< X
	< (130+3σ) ≤OL	< (130+3σ) ≤OL	< (250+3σ) ≤OL
Pb	BL≤(700-3σ)< X	BL≤(700-3σ)< X	BL≤(500-3σ)< X
	< (1300+3σ) ≤OL	< (1300+3σ) ≤OL	< (1500+3σ) ≤OL
Hg	BL≤(700-3σ)< X	BL≤(700-3σ)< X	BL≤(500-3σ)< X
	< (1300+3σ) ≤OL	< (1300+3σ) ≤OL	< (1500+3σ) ≤OL
Br	BL≤(300-3σ)< X	N.A.	BL≤(250-3σ)< X
Cr	BL≤(700-3σ)< X	BL≤(700-3σ)< X	BL≤(500-3σ)< X

Note: ① BL "below limit" = the result less than the limit.

- ② OL "over limit" = the result greater than the limit.
- ③ IN = inconclusive, the region where need further chemical testing by ICP-OES (for Pb、Cd、Hg), UV-VIS (for Cr(VI)) and GC/MSD (for PBBs, PBDEs).
- 4 3σ = Repeability of the analyser at the action level.
- 5 LOD = Limit of detection.
- (^3) (a) mg/kg=ppm=0.0001%;
- (b) N.D. = Not detected (lower than RL);
- (c) Reporting Limit (RL) and Limit of Directive 2011/65/EU.

Parameter	Unit	Limit	Reporting Limit (RL)
Lead (Pb)	mg/kg	1000	10
Cadmium (Cd)	mg/kg	100	10
Mercury (Hg)	mg/kg	1000	10
Chromium VI (Cr VI)	mg/kg	1000	R1
Group PBBs	mg/kg	1000	R2

Page 8 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date:** February 03, 2021

Group PBDEs mg/kg	1000	R2
-------------------	------	----

R1: Cr(VI) for metal sample, the reporting limit (RL)= Method Detection Limit (MDL)=0.10 ug/cm². The reporting limit (RL) of Cr(VI) for polymers and electronics is 10mg/kg.

R2: The reporting limit (RL) for single compound of PBBs & PBDEs is 50mg/kg.

(d) According to IEC 62321-7-1: 2015, result on Cr(VI) for metal sample is shown as Negative, Inconclusive or Positive: Negative = Absence of Cr(VI), Inconclusive = Maybe exist Cr(VI), Positive = Presence of Cr(VI).

Colorimetric result (Cr(VI) concentration)	Qualitative result
The sample solution is < the 0.10 ug/cm² equivalent comparison standard solution	The sample is negative for Cr(VI)-The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.
The sample solution is ≥ the 0.10 ug/cm² and ≤ the 0.13 ug/cm² equivalent comparison standard solutions	The result is considered to be inconclusive – Unavoidable coating variations may influence the determination. Recommendation: if addition samples are available, perform a total of 3 trials to increase sampling surface area. Use the averaged result of the 3 trials for the final determination.
The sample solution is > the 0.13 ug/cm² equivalent comparison standard solution	The sample is positive for Cr(VI)-The Cr(VI) concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI)



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021

B. Phthalates—DBP, BBP, DEHP & DIBP

Test Method: Ref. to IEC 62321-8: 2017

Determination of Phthalates in polymers by Gas Chromatography-Mass Spectrometry

(GC-MS)

Test result:

Test item	DBP	ВВР	DEHP	DIBP
Maximum Permissible Limit (mg/kg)	1000	1000	1000	1000

		Test item (mg/kg)						
Material No.	DBP	ВВР	DEHP	DIBP	Conclusion			
4	N.D.	N.D.	N.D.	N.D.	Pass			
8	N.D.	N.D.	N.D.	N.D.	Pass			
13	N.D.	N.D.	N.D.	N.D.	Pass			
17	N.D.	N.D.	N.D.	N.D.	Pass			
18	N.D.	N.D.	N.D.	N.D.	Pass			
19	N.D.	N.D.	N.D.	N.D.	Pass			
20	N.D.	N.D.	N.D.	N.D.	Pass			
22	N.D.	N.D.	N.D.	N.D.	Pass			
23	N.D.	N.D.	N.D.	N.D.	Pass			
24	N.D.	N.D.	N.D.	N.D.	Pass			
25	N.D.	N.D.	N.D.	N.D.	Pass			
26	N.D.	N.D.	N.D.	N.D.	Pass			
45	N.D.	N.D.	N.D.	N.D.	Pass			
46	N.D.	N.D.	N.D.	N.D.	Pass			
47	N.D.	N.D.	N.D.	N.D.	Pass			
56	N.D.	N.D.	N.D.	N.D.	Pass			
59	N.D.	N.D.	N.D.	N.D.	Pass			

Page 10 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date:** February 03, 2021

		Test item (mg/kg)							
Material No.	DBP	ВВР	DEHP	DIBP	Conclusion				
61	N.D.	N.D.	N.D.	N.D.	Pass				
67	N.D.	N.D.	N.D.	N.D.	Pass				
68	N.D.	N.D.	N.D.	N.D.	Pass				
79	N.D.	N.D.	N.D.	N.D.	Pass				
80	N.D.	N.D.	N.D.	N.D.	Pass				
81	N.D.	N.D.	N.D.	N.D.	Pass				
84	N.D.	N.D.	N.D.	N.D.	Pass				
85	N.D.	N.D.	N.D.	N.D.	Pass				
86	N.D.	N.D.	N.D.	N.D.	Pass				
87	N.D.	N.D.	N.D.	N.D.	Pass				
88	N.D.	N.D.	N.D.	N.D.	Pass				
89	N.D.	N.D.	N.D.	N.D.	Pass				
91	N.D.	N.D.	N.D.	N.D.	Pass				
92	N.D.	N.D.	N.D.	N.D.	Pass				
93	N.D.	N.D.	N.D.	N.D.	Pass				
94	N.D.	N.D.	N.D.	N.D.	Pass				
95	N.D.	N.D.	N.D.	N.D.	Pass				
96	N.D.	N.D.	N.D.	413	Pass				
97	N.D.	N.D.	N.D.	N.D.	Pass				

Remark: 1. Reporting Limit (RL) for BBP, DBP, DEHP, DIBP=50mg/kg.

2. N.D. = Not Detected (<RL).



Report No. GTS2101180019EN **Job No.**:28837 **Date:** February 03, 2021

Sample photo(s):



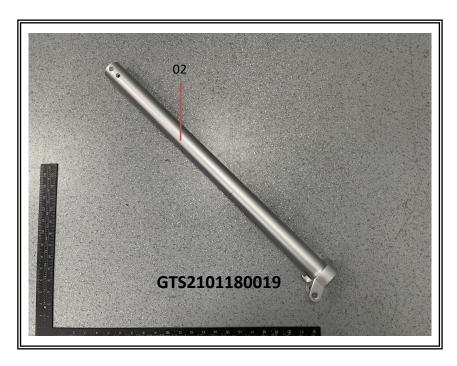
Test item: KS1 scooter Tested Model No.: KS1

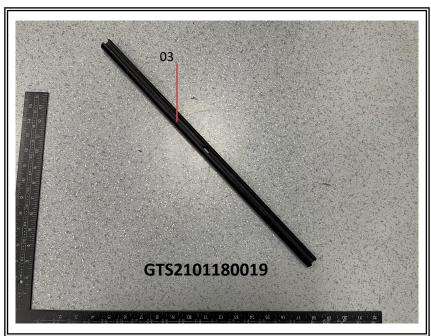


Page 12 of 28



Report No. GTS2101180019EN

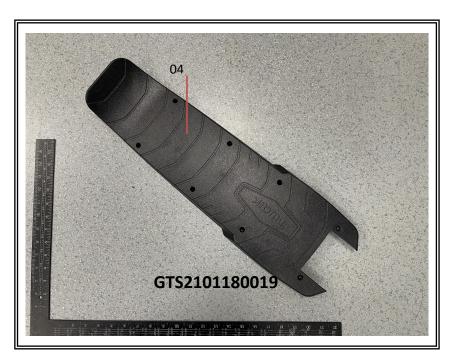




Page 13 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021





Page 14 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021





Page 15 of 28



Report No. GTS2101180019EN **Job No.**:28837





Page 16 of 28

Date: February 03, 2021



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021





Page 17 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021





Page 18 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date:** February 03, 2021





Page 19 of 28



Report No. GTS2101180019EN





Page 20 of 28



Report No. GTS2101180019EN

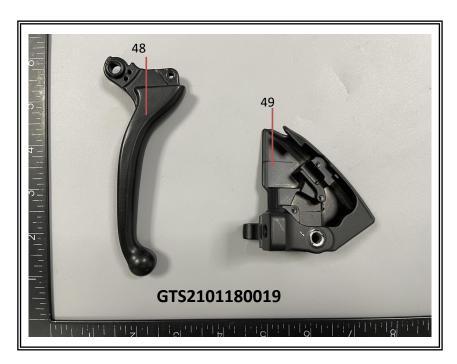


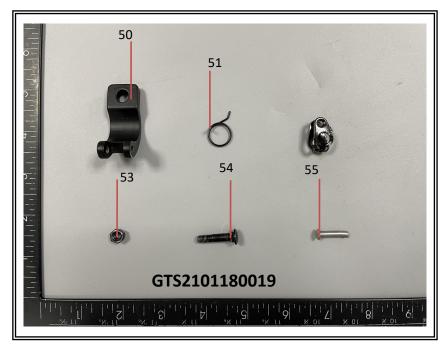


Page 21 of 28



Report No. GTS2101180019EN





Page 22 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021





Page 23 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021





Page 24 of 28



Report No. GTS2101180019EN





Page 25 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021

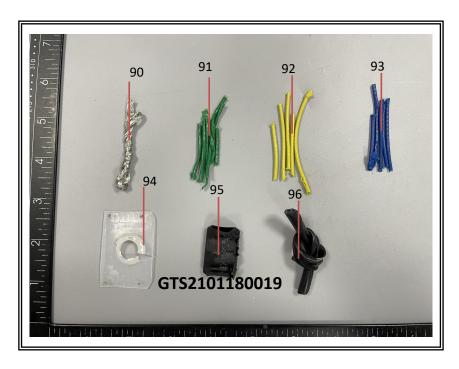




Page 26 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date:** February 03, 2021



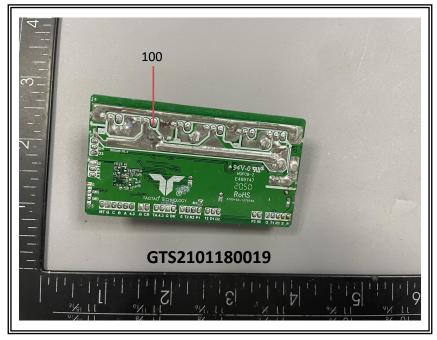


Page 27 of 28



Report No. GTS2101180019EN **Job No.**:28837 **Date**: February 03, 2021





GTS authenticate the photo(s) on original report only

****End of Report****

Page 28 of 28