

CAS Testing Technical Services (GuangZhou) Co.,Ltd.

Report No. GXH23040479(E)

Date: 2023/04/25

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TEST REPORT

Applicant: ChangSha RESI Electronics Technology Co., Ltd.

Address: 102, 202, 302 and 402, Block B, Building 15, Depu Wuhe Enterprise Park, No. 1 and 3,

Luositang Road ChangSha City, Hunan Province, P. R. China

The following merchandise was (were) submitted and identified by the client as:

Name of Sample: TPAN0220 Series Non-inductive Power Resistor

Test Type: Commission

Analysis No.: GXH23040479

Sample Quantity: 3 PCS

Batch No. /Brand/Model: /

Sample Received : 2023/04/14

Test Period: 2023/04/17-2023/04/24

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

Test Result: Please refer to next page(s).

Edited by:

Approved by:

Official Seal:

Add: No. 368 Xingke Road, Tianhe District, Guangzhou, P. R. China. E-mail: atc@gic.ac.cn

Tel: 400-119-8299, 020-85231290

Website: http://www.cas-test.org



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Conclusion:

J'	Report No. GXH23040479(E)	Date: 2023/04/25	Page No.	: 2 of 7
	Conclusion:	920 a	1041/01	TOSTING
Gr.	TESTED SAMPLES	TEST STAN	DARD COOK	RESULT
dein	TPAN0220 Series	B H0 B; 4; 2011/65/BH ;4	100 00 150 00 150 00 00 00 00 00 00 00 00 00 00 00 00 0	D. CC
Co	Non-inductive Power Resistor	RoHS Directive 2011/65/EU with	amendment (EU) 2015/863	PASS

PASS means that the results shown on the report comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863

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Sample Description:

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	Sample Description	on:	20	7/,	emi	Losin	
der	Sample Number	Tested Materia	l Description	ce Acar	Photo	uces	
Yen	001	Silvery surface	d metal sheet	-02	002 003	30	80
200	Ciento ooz stine	Black plas	tic shell Tosling	001 -		20 10 1	
8111.7	561003	Silvery surface	ed metal pin	40 20	10 20 30 		16
Acader	MOT LESTING	Academy	esciences restitu		004	0 30 20	
(m)	Science 004	Chill Black/grey cer	anne sneet	40 20	10 20 30	10 mm	3/2
The.	of School	Chillogo	O BE CONTINUE	*****	Chinese	Her	
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Test Results:

- 1. Screening test for the specified hazardous substances of RoHS for the selected materials of the submitted sample:
 - Heavy Metal (Cadmium, Chromium, Mercury, Lead) Content Test
 - Bromine Content Test

According to IEC 62321-3-1:2013, and Quantification tested with Energy Dispersive X-ray Fluorescence

Spectrometers.

١.	spectrometers.	14	dla	11110	120	C ()
5	Sample No.	Total (Total <	Total	Total	Total
	Sample No.	Lead 0	Cadmium 05	Mercury	Chromium	Bromine
	. 001	BL	BLIEN	BL	BL 0	NA
	SC 002	BL	BL	BL	Bry	IN (OST)
1	003	BL	(CITT) BL	BL	BL	NAS
	004	BL MC	BL ON	BL (BL	SCIBL

XRF Screening Limits in mg/kg for Regulated Elements in Various Matrices:

Element	Polymer Materials	Metallic Materials	Composite Materials
Cd	BL≤(70-3σ) <x<(130+3σ)≤ ol<="" td=""><td>BL≤(70-3σ)<x<(130+3σ)≤ ol<="" td=""><td>LOD<x<(150+3σ)≤ ol<="" td=""></x<(150+3σ)≤></td></x<(130+3σ)≤></td></x<(130+3σ)≤>	BL≤(70-3σ) <x<(130+3σ)≤ ol<="" td=""><td>LOD<x<(150+3σ)≤ ol<="" td=""></x<(150+3σ)≤></td></x<(130+3σ)≤>	LOD <x<(150+3σ)≤ ol<="" td=""></x<(150+3σ)≤>
Pb	BL≤(700-3σ) <x<(1300+3σ)≤ ol<="" td=""><td>BL≤(700-3σ)<x<(1300+3σ)≤ ol<="" td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ ol<="" td=""></x<(1500+3σ)≤></td></x<(1300+3σ)≤></td></x<(1300+3σ)≤>	BL≤(700-3σ) <x<(1300+3σ)≤ ol<="" td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ ol<="" td=""></x<(1500+3σ)≤></td></x<(1300+3σ)≤>	BL≤(500-3σ) <x<(1500+3σ)≤ ol<="" td=""></x<(1500+3σ)≤>
Hg	BL≤(700-3σ) <x<(1300+3σ)≤ ol<="" td=""><td>BL≤(700-3σ)<x<(1300+3σ)≤ ol<="" td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ ol<="" td=""></x<(1500+3σ)≤></td></x<(1300+3σ)≤></td></x<(1300+3σ)≤>	BL≤(700-3σ) <x<(1300+3σ)≤ ol<="" td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ ol<="" td=""></x<(1500+3σ)≤></td></x<(1300+3σ)≤>	BL≤(500-3σ) <x<(1500+3σ)≤ ol<="" td=""></x<(1500+3σ)≤>
Br	BL≤(300-3σ) <x< td=""><td>NA</td><td>BL≤(250-3σ)<x< td=""></x<></td></x<>	NA	BL≤(250-3σ) <x< td=""></x<>
Cr	BL≤(700-3σ) <x< td=""><td>BL≤(700-3σ)<x< td=""><td>BL≤(500-3σ)<x< td=""></x<></td></x<></td></x<>	BL≤(700-3σ) <x< td=""><td>BL≤(500-3σ)<x< td=""></x<></td></x<>	BL≤(500-3σ) <x< td=""></x<>

Note: BL = Below Limit, OL = Over Limit, IN = Inconclusive, LOD = Limit of Detection, NA = Not Applicable.

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2. Test for Flame retardants

Test Method: With reference to IEC 62321-6:2015, tested by GC-MS.

3	118 1100	Result (mg/kg)	Limit
10°S	Test Item	002	(mg/kg)
cos 1	Monobromobiphenyl	ND 10/M	C 05/11/6
ich	Dibromobiphenyl	ND NO	os to
20,	Tribromobiphenyl	ND ND	· ologo
	Tetrabromobiphenyl	ND Willes	ch.
PBBs	Pentabromobiphenyl	ione ND Chi	C CDDD
PBBS	Hexabromobiphenyl	SC ND LETTY	Sum of PBBs < 1000
0/2	Heptabromobiphenyl	10) HIND ICON	1000
(a)	Octabromobiphenyl	ND ND	200
~0	Nonabromobiphenyl	ND WINES	cclotes
200	Decabromobiphenyl	ND C	130
· oucos	Sum of PBBs	ND ND	23
Colo.	Monobromodiphenyl Ether	MIND WHEN THE	. 0
2)	Dibromodiphenyl Ether	ND ND	Lopes
	Tribromodiphenyl Ether	COS ND MO	Cape
68	Tetrabromodiphenyl Ether	ND CHI	al His
PBDEs	Pentabromodiphenyl Ether	ND ND	Sum of PBDEs
PBDES	Hexabromodiphenyl Ether	ND.	< 1000
196,	Heptabromodiphenyl Ether	CND	1000
Ψ.	Octabromodiphenyl Ether	ND MINE	10
0	Nonabromodiphenyl Ether	ND (C)	wees.
ione	Decabromodiphenyl Ether	ND NO	301011
13Ch	Sum of PBDEs	ND CH	930
		20.1	1 - 3

Note:

- 1. All Concentrations express in "mg/kg" (milligram per kilogram), 1mg/kg = 0.0001%;
- 2. The MDL (Method Detection Limit) for single compound of PBBs and PBDEs is 20 mg/kg;
- 3. ND = Test result was below the method detection limit or limit of quantitation ,i.e., the corresponding test item was not detected.

****** TO BE CONTINUE ******



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3. Test for Phthalates

Test method: With reference to IEC 62321-8:2017, tested by GC-MS & PY-GC-MS

Test Item	Bis(2-ethylhexyl) phthalate (DEHP) (mg/kg)	Butyl benzyl phthalate (BBP) (mg/kg)	Dibutyl phthalate (DBP) (mg/kg)	Diisobutyl phthalate (DIBP) (mg/kg)
Method Detection Limit	100	100	100	(100
Limit	1000	1000	1000	1000
002	ese nd	ND (MIN ND	ND
15CP 004 CM	ND 92	ND	NDiletti	ND OSTITUTE

Note:

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- 1. All Concentrations express in "mg/kg" (milligram per kilogram), 1mg/kg = 0.0001%;
- Chinese Academy of Science 2. ND = Test result was below the method detection limit or limit of quantitation, i.e., the corresponding test item was not detected. se Academy of Sciences

SAMPLE PHOTO



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

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Statement

- This report is issued by The CAS Testing Technical Services (GuangZhou) Co.,Ltd. (hereinafter referred to as "Our Company").
- This report is invalid if not affixed with authorized stamp of test and paging seal.
- This report is invalid without signature of verifier and approver.
- 4. This report is invalid if being supplemented, deleted or altered.
- 5. Without written permission of our Company, this report can not be reproduced in part (except in whole).
- 6. The result(s) shown in this report refer only to the sample(s) tested.
- 7. Objections to this report must be submitted to our Company within 15 days. Otherwise, it will automatically deem to have accepted this report.
- 8. The Client shall be responsible for the accuracy, authenticity and completeness of the samples and information submitted for inspection, and the disputes arising therefrom shall be borne by the Client.
- 9. As any reports is issued as a result of this application for testing services, our Company will strictly keep confidentiality to the Clients. Except where disclosure is required on the basis of laws, regulations, judgments, and rulings (including in accordance with summons, court, or government proceedings).
- 10. The result(s) or conclusion(s) shown in this report about the description of the characteristics, composition, properties or quality are based on the specific time, methods and applicable criteria. Using different methods and criteria or under different environmental conditions for testing may come to different conclusions.
- 11. The data result(s) just for scientific research, teaching, internal quality control etc.
- 12. Since our Company's causes lead to modify the contents of this report, our Company shall reissue this report and bear the modification cost. The Client shall return the original report. Since the Client's causes lead to modify the contents of this report, the Client need to submit an application form for the change of report to our Company. The Client shall bear the modification cost and return the original report if our Company approves to reissue this report.
- 13. The English version of this statement is translated from the Chinese one. If there is any disagreement between them, the Chinese version will be the final explanation.