



TEST REPORT

LAB NO. : (6620)254-1090
 DATE : September 15, 2020
 PAGE : 1 OF 5

Applicant:
VISHAY SEMICONDUCTOR SHANGHAI CO., LTD
 501 WEST JIANGCHANG RD, SHANGHAI 200436. P.R.C.

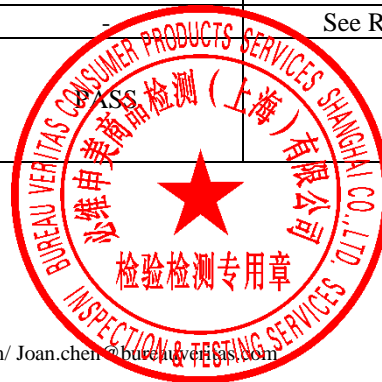
Date of Submission: 2020-09-10
 Test Period: 2020-09-10 to 2020-09-15
 Sample Mode: Sample Presentation
 BV EE Ref. No.: /

Sample Description :		Sample(s) received is(are) stated to be: Clip	
Manufacturer:	/	Buyer:	/
Style No(s):	Clip	PO No.:	/
Country of Origin:	/	Country of Destination:	Oversea Country

Test Item(s): Details see page 2

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
Total Beryllium Content	-	See Result
Heavy Metals, Flame Retardants, Phthalate Content - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendments & As Applicant's requirement		



REMARK

If there are questions or concerns on this report, please contact the following persons:

General enquiry and invoicing

Mr. Speed Yu/ Ms. Cabell Chen
 (021) 24166888*6832/6850

Technical enquiry

Speed.yu @cn.bureauveritas.com/ Joan.chen@bureauveritas.com
 Mr. Gordon Yu/ Ken He
 (021) 24166888*6852/6859
 Gordon.Yu@cn.bureauveritas.com/ Kenny.he@cn.bureauveritas.com

BUREAU VERITAS
CONSUMER PRODUCTS SERVICES DIVISION (SHANGHAI)

Laboratory Test Location:
 No.368,Guangzhong Road, Zhuanqiao Town, Minhang, Shanghai
 No.168,Guanghua Road, Zhuanqiao Town, Minhang, Shanghai

PREPARED BY : Liza

Lynd Lv
 Technical Specialist



Bureau Veritas
 Consumer Products Services Division (Shanghai)
 No.168, Guanghua Road, Zhuanqiao Town,
 Minhang, Shanghai, China.
 Post Code: 201108
 Tel: 86-21-24166888 Fax: 86-21-64890042
 Email: bvcpsh_info@cn.bureauveritas.com
 Http: www.bureauveritas.com/cps

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/cps> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



LAB NO. : (6620)254-1090
DATE : September 15, 2020
PAGE : 2 OF 5

Sample Description Assigned by Laboratory:

Test Item	Description
1	Metal

Note:

g = gram(s)	% = percentage
mcg = microgram(s)	1 mg/kg = 0.0001%
mg/kg = milligram per kilogram	"<" = less than
mg/L = milligram per litre	">" = Greater than
g/kg = gram(s) per kilogram	Req. = Requirement
MDL = Method Detection Limit	"-" = Not Regulated
ND = Not Detected (< MDL)	NA = Not applicable
EX = Exempted	

Photo of the Submitted Sample





BUREAU
VERITAS

LAB NO. : (6620)254-1090
DATE : September 15, 2020
PAGE : 3 OF 5

TEST RESULT

I.Total Beryllium Content

Test methods: The sample is comminuted and digested with acid mixtures, then analyzed by ICP-AES technique

Parameter	Unit	MDL	Result
			1
Beryllium (Be)	mg/kg	10	ND



**BUREAU
VERITAS**

LAB NO. : (6620)254-1090
DATE : September 15, 2020
PAGE : 4 OF 5

TEST RESULT

II. Heavy Metals, Flame Retardants, Phthalate Content - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendments & As Applicant's requirement

Test Method : See Appendix.

-	Unit	MDL	Maximum Allowable Limit (Req.)	Result
Test Item	-	-	-	1
Parameter	-	-	-	-
Lead (Pb)	mg/kg	2	1000	11.3
Cadmium (Cd)	mg/kg	2	100	ND
Mercury (Hg)	mg/kg	2	1000	ND
Chromium VI (Cr VI)	mg/kg	-	Negative	Negative
MonoBB	mg/kg	5		ND
DiBB	mg/kg	5		ND
TriBB	mg/kg	5		ND
TetraBB	mg/kg	5		ND
PentaBB	mg/kg	5		ND
HexaBB	mg/kg	5		ND
HeptaBB	mg/kg	5		ND
OctaBB	mg/kg	5		ND
NonaBB	mg/kg	5		ND
DecaBB	mg/kg	5		ND
Sum of PBBs	mg/kg	-	1000	ND
MonoBDE	mg/kg	5		ND
DiBDE	mg/kg	5		ND
TriBDE	mg/kg	5		ND
TetraBDE	mg/kg	5		ND
PentaBDE	mg/kg	5		ND
HexaBDE	mg/kg	5		ND
HeptaBDE	mg/kg	5		ND
OctaBDE	mg/kg	5		ND
NonaBDE	mg/kg	5		ND
DecaBDE	mg/kg	5		ND
Sum of PBDEs	mg/kg	-	1000	ND
Dibutyl phthalate (DBP)	mg/kg	50	1000	ND
Butyl benzyl phthalate (BBP)	mg/kg	50	1000	ND
Di-2-ethylhexyl phthalate (DEHP)	mg/kg	50	1000	ND
Diisobutyl phthalate (DIBP)	mg/kg	50	1000	ND
Conclusion	-	-	-	PASS

Remark:

- The list of analytes is summarized in table of Appendix.
- Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Parliament and Council Directive 2011/65/EU, Article 4(1). While, positive means the presence of Cr VI on tested areas and the result(s) was (were) regarded as in conflict with European Parliament and Council Directive 2011/65/EU, Article 4(1).
- According to European Parliament and Council Directive 2011/65/EU, Article 5 "Adaptation of the Annexes to scientific and technical progress", exemption(s) should be granted to the materials and components of Test Item(s) in the lists in Annexes III and IV of this directive.

END



**BUREAU
VERITAS**

LAB NO. : (6620)254-1090
DATE : September 15, 2020
PAGE : 5 OF 5

APPENDIX

List of Analytes and their Corresponding Test Methods [European Parliament and Council Directive 2011/65/EU] :

No.	Name of Analytes	Test Method(s)
1	Lead (Pb)	With reference to IEC 62321-5: 2013.
2	Cadmium (Cd)	
3	Mercury (Hg)	With reference to IEC 62321-4: 2013+AMD1: 2017 CSV.
4	Chromium VI (Cr VI)	Metal: With reference to IEC 62321-7-1:2015. Polymers & Electronics: With reference to IEC 62321-7-2: 2017.
5	Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	With reference to IEC 62321-6:2015.
6	Polybromodiphenyl ethers (PBDEs) - Bromodiphenyl ether (MonoBDE) - Dibromodiphenyl ether (DiBDE) - Tribromodiphenyl ether (TriBDE) - Tetrabromodiphenyl ether (TetraBDE) - Pentabromodiphenyl ether (PentaBDE) - Hexabromodiphenyl ether (HexaBDE) - Heptabromodiphenyl ether (HeptaBDE) - Octabromodiphenyl ether (OctaBDE) - Nonabromodiphenyl ether (NonaBDE) - Decabromodiphenyl ether (DecaBDE)	
7	Dibutyl phthalate (DBP) Butyl benzyl phthalate (BBP) Di-2-ethylhexyl phthalate (DEHP) Diisobutyl phthalate (DIBP)	Reference to IEC 62321-8: 2017.