

# **TEST REPORT**

LAB NO. DATE PAGE : (8822)326-0085 : Nov 29, 2022 : 1 OF 9

Applicant Name:Applicant Address:Date of Submission:Test Period:Sample Description:Sample Size:Style No. :

## PARTICLE INDUSTRIES, INC 325 9TH ST, SAN FRANCISCO, CA 94103 USA, 415-319-1553 NOV 22, 2022 NOV 22, 2022 TO NOV 29, 2022 E SERIES MODULE 1 E404X



BUREAU VERITAS SHENZHEN CO.,LTD DONGGUAN BRANCH

jon Bui

Lisa Bai Analytical lab Senior Supervisor

#### RT/ Joy Li REMARK

If there are questions or concerns on this report, please contact the following persons:Report Enquiry:(86) 0769 89952999 Ext. 8175CPSAnalytical.DG@bureauveritas.comBusiness Contact:(86) 0769 85893595This report shall not be reproduced except in full, without the written approval of our laboratory.

Bureau Veritas Shenzhen Co., Ltd., Dongguan Branch No.96, Houjie, Guantai Road., Houjie, Dongguan, Guangdong, China Tel: +86-769-89982098 Fax: +86-769-85991080 www.cps.bureau veritas.com This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <a href="http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/">http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/</a> 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 set of tho ur 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. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty; into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; 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 you unqualified acceptance of the completeness of the report contents.



: (8822)326-0085 : Nov 29, 2022 : 2 OF 9

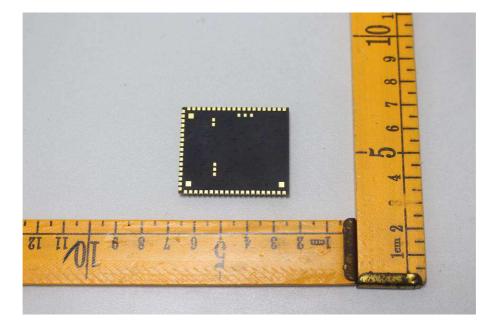
## SUMMARY OF TEST RESULTS

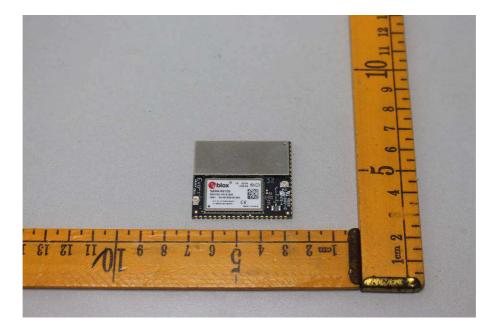
TEST REQUESTED	CONCLUSION	REMARK
European Parliament and Council Directive		
2011/65/EU on the Restriction of the Use of Certain		
Hazardous Substances in Electrical and Electronic	PASS	-
Equipment (RoHS) with its Amendment Directive		
(EU)2015/863		



: (8822)326-0085 : Nov 29, 2022 : 3 OF 9

## Photo of the Submitted Sample

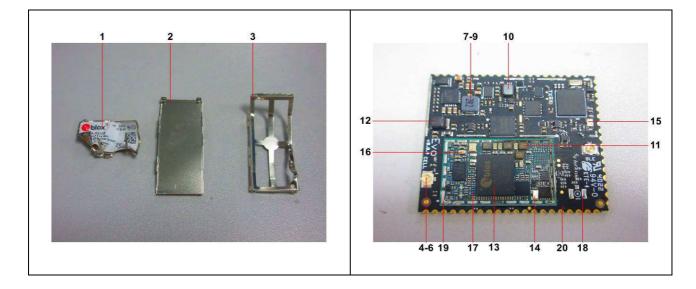




BUREAU VERITAS

: (8822)326-0085 : Nov 29, 2022 : 4 OF 9

## Photo of Test Item(s)





: (8822)326-0085 : Nov 29, 2022 : 5 OF 9

## **Component Description List**

Test Item(s)	Component Description(s)	Location	Style(s)	
1	Black/white/red printed yellow plastic	Sticker, cover, PCB	-	
2	Silvery metal	Cover, PCB	-	
3	Silvery metal	Frame, cover, PCB	-	
4	White plastic	Socket, PCB	-	
5	Golden metal	Pin, socket, PCB	-	
6	Silvery metal	Contact plate, socket, PCB	-	
7	Grey metal	Core, inductor, PCB	-	
8	Coppery metal	Coil, inductor, PCB	-	
9	Silvery metal	Pin, inductor, PCB	-	
10	Black metal	Core, inductor, PCB	-	
11	Brown metal	Core, inductor, PCB	-	
12	Black body	Diode, PCB	-	
13	Black body	SMD IC, PCB	-	
14	Silvery body	SMD EC, PCB	-	
15	Silvery/golden body	SMD EC, PCB	-	
16	Brown body	SMD capacitor, PCB	-	
17	Blue body	SMD EC, PCB	-	
18	Silvery solder	Solder, PCB	-	
19	Green PCB	РСВ	-	
20	Black PCB	РСВ	-	



: (8822)326-0085 : Nov 29, 2022 : 6 OF 9

## TEST RESULT

Compliance Test – 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 Amendment Directive (EU)2015/863

Test Method : See Appendix.

-		Result (s)								
Parameter	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Chromium VI (Cr VI)	PBBs & PBDEs	BBP	DBP	DEHP	DIBP	Conclusion
Unit	mg/kg					-				
Test Item(s)	-	-	-	-	-	-	-	-	-	-
1	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
2	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
3	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
4	BL	BL	BL	BL	BL	BL*	BL*	BL*	BL*	PASS
5	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
6	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
7	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
8	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
9	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
10	BL	BL	BL	Negative*	NA	NA	NA	NA	NA	PASS
11	BL	BL	BL	Negative*	NA	NA	NA	NA	NA	PASS
12	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
13	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
14	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
15	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
16	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
17	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
18	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
19	BL	BL	BL	BL	NA	NA	NA	NA	NA	PASS
20	BL	BL	BL	BL	BL*	BL*	BL*	BL*	BL*	PASS



#### : (8822)326-0085 : Nov 29, 2022 : 7 OF 9

NA = Not applicable

ND = Not detected

### TEST RESULT

Note / Key:

BL = Below limit OL = Over limit mg/kg = milligram(s) per kilogram = ppm = part(s) per million Detection Limit : See Appendix.

Remark:

- \*Denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, non-uniformity composition, surface flatness.
- \*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 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 Council Directive 2011/65/EU, Article 4(1).
- According to European 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.



: (8822)326-0085 : Nov 29, 2022 : 8 OF 9

## **APPENDIX**

			Detection Lim	it(mg/kg)		Maximum
No.	Name of Analytes	X-1	ay fluorescence (XF	<b>2F</b> ) <sup>[a]</sup>	Wet	Allowable Limit (mg/kg)
		Plastic	Metal/Glass/ Ceramic	Others	Chemistry	
1	Lead (Pb)	100	200	200	10 <sup>[b]</sup>	1000
2	Cadmium (Cd)	50	50	50	10 <sup>[b]</sup>	100
3	Mercury (Hg)	100	200	200	10 <sup>[c]</sup>	1000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	See <sup>[d]</sup> /10 <sup>[e]</sup> /3 <sup>[f,g]</sup>	1000 / Negative <sup>[h</sup>
6	Bromine (Br)	200	NA	200	NA	NA
7	<ul> <li>Bromobiphenyl (MonoBB)</li> <li>Dibromobiphenyl (DiBB)</li> <li>Tribromobiphenyl (TriBB)</li> <li>Tetrabromobiphenyl (TetraBB)</li> <li>Pentabromobiphenyl (PentaBB)</li> <li>Hexabromobiphenyl (HexaBB)</li> <li>Heptabromobiphenyl (HeptaBB)</li> <li>Octabromobiphenyl (OctaBB)</li> <li>Nonabromobiphenyl (NonaBB)</li> <li>Decabromobiphenyl (DecaBB)</li> </ul>	NA	NA	NA	Each 50 <sup>[i]</sup>	Sum 1000
8	<ul> <li>Polybromodiphenyl ethers (PBDEs)</li> <li>Bromodiphenyl ether (MonoBDE)</li> <li>Dibromodiphenyl ether (DiBDE)</li> <li>Tribromodiphenyl ether (TriBDE)</li> <li>Tetrabromodiphenyl ether (TetraBDE)</li> <li>Pentabromodiphenyl ether (PentaBDE)</li> <li>Hexabromodiphenyl ether (HexaBDE)</li> <li>Heptabromodiphenyl ether (HeptaBDE)</li> <li>Octabromodiphenyl ether (OctaBDE)</li> <li>Nonabromodiphenyl ether (NonaBDE)</li> <li>Decabromodiphenyl ether (DecaBDE)</li> </ul>	NA	NA	NA	Each 50 <sup>[i]</sup>	Sum 1000
9	<ul> <li>Dibutyl phthalate (DBP)</li> <li>Butyl benzyl phthalate (BBP)</li> <li>Di-2-ethylhexyl phthalate (DEHP)</li> <li>Diisobutyl phthalate (DIBP)</li> </ul>	NA	NA	NA	Each 50 <sup>[j]</sup>	Each 100





: (8822)326-0085 : Nov 29, 2022 : 9 OF 9

- NA = Not applicable IEC = International Electrotechnical Commission
- <sup>[a]</sup> Test method with reference to International Standard IEC 62321-3-1: 2013.
- <sup>[b]</sup> Test method with reference to International Standard IEC 62321-5: 2013.
- <sup>[c]</sup> Test method with reference to International Standard IEC 62321-4:2013+A1:2017.
- <sup>[d]</sup> Metal Test method with reference to International Standard IEC 62321-7-1: 2015.
- <sup>[e]</sup> Polymers and Electronics Test method with reference to European Standard EN 62321-7-2: 2017.
- <sup>[f]</sup> Leather Test method International Standard ISO 17075-1:2017.
- [g] Other Than Metal, Leather, Polymers and Electronics Test method with reference to International Standard ISO 17075-1:2017. 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).
- <sup>[i]</sup> Test method with reference to International Standard IEC 62321-6: 2015.
- <sup>[j]</sup> Test method with reference to International Standard IEC 62321-8: 2017.

#### Testing Approach [ Compliance Test for European Parliament and Council Directive 2011/65/EU ] :

The testing approach was with reference to the following document(s).

- 1 International Standards IEC 62321-1: 2013 and IEC 62321-2: 2013
- 2 "RoHS Enforcement Guidance Document Version 1" by EU RoHS Enforcement Authorities Informal Network. (May 2006)
- 3 "RoHS Regulations Government Guidance Notes" by United Kingdom Department for Business Innovation & Skills. (February 2011)
- 4 "Final Report to RoHS substances (Hg, Pb, Cr(VI), Cd, PBB and PBDE) in electrical and electronic equipment in Belgium" by Belgium
- Federal Public Service Health, Food Chain Safety and Environment. (November 2005)

\*\*\* End of Report \*\*\*