



Test Report

No. 3494776-CH02-R3

Date: July 2, 2014

Page 1 of 4

**Transko Electronics, Inc.
3981 E. Miraloma Ave.
Anaheim, CA 92806
United States**

This report supersedes all previous documents bearing the test report number 3494776-CH02-R2.

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Ceramic SMD crystal oscillator

Sample Received Date: **5/15/2014**

Testing Period: **5/17/2014 – 5/29/2014**

Test Requested : Please refer to the result summary.

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

Result Summary :

Test Requested	Comment
European Directive 2011/65/EU Annex II (RoHS); recasting 2002/95/EC	PASS

Signed for and on behalf of SGS North America, Inc.

Prepared By:

Christina Crimi
Laboratory Manager, Chemistry Laboratory

Veronica Marrero
Laboratory Operations Lead, Chemistry Laboratory

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 45 days only."



Test Report

No. 3494776-CH02-R3

Date: July 2, 2014

Page 2 of 4

1. European Directive 2011/65/EU Annex II (RoHS); recasting 2002/95/EC:

Cadmium, Lead, Mercury, Hexavalent Chromium, Polybromobiphenyl (PBB) and Polybromodiphenyl ether (PBDE) content

Method : With reference to IEC 62321-5:2013. Lead, Cadmium and Mercury were analyzed by Inductively Coupled Argon Plasma Spectrometry, Chromium (VI) was analyzed by UV-Visible Spectroscopy and PBB, PBDE were analyzed by Gas Chromatography – Mass Spectrometry (GC-MS).

Test Item	Result (mg/kg)		Detection Limit (mg/kg)	Permissible Limit (mg/kg)
	1			
Cadmium (Cd)	7		2	100
Lead (Pb)	7		2	1000
Mercury (Hg)	ND		2	1000
Hexavalent Chromium (Cr(VI))	ND*		2	1000
Sum of PBBs	ND		--	1000
Monobromobiphenyl	ND		5	--
Dibromobiphenyl	ND		5	--
Tribromobiphenyl	ND		5	--
Tetrabromobiphenyl	ND		5	--
Pentabromobiphenyl	ND		5	--
Hexabromobiphenyl	ND		5	--
Heptabromobiphenyl	ND		5	--
Octabromobiphenyl	ND		5	--
Nonabromobiphenyl	ND		5	--
Decabromobiphenyl	ND		5	--
Sum of PBDEs	ND		--	1000
Monobromodiphenyl ether	ND		5	--
Dibromodiphenyl ether	ND		5	--
Tribromodiphenyl ether	ND		5	--
Tetrabromodiphenyl ether	ND		5	--
Pentabromodiphenyl ether	ND		5	--
Hexabromodiphenyl ether	ND		5	--
Heptabromodiphenyl ether	ND		5	--
Octabromodiphenyl ether	ND		5	--
Nonabromodiphenyl ether	ND		5	--
Decabromodiphenyl ether	ND		5	--
Comment	PASS		--	--

**Total Chromium analysis by ICP-MS was not detected above threshold in submitted sample. Therefore, Hexavalent Chromium determination using UV-Visible Spectroscopy was not performed.*

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 45 days only."

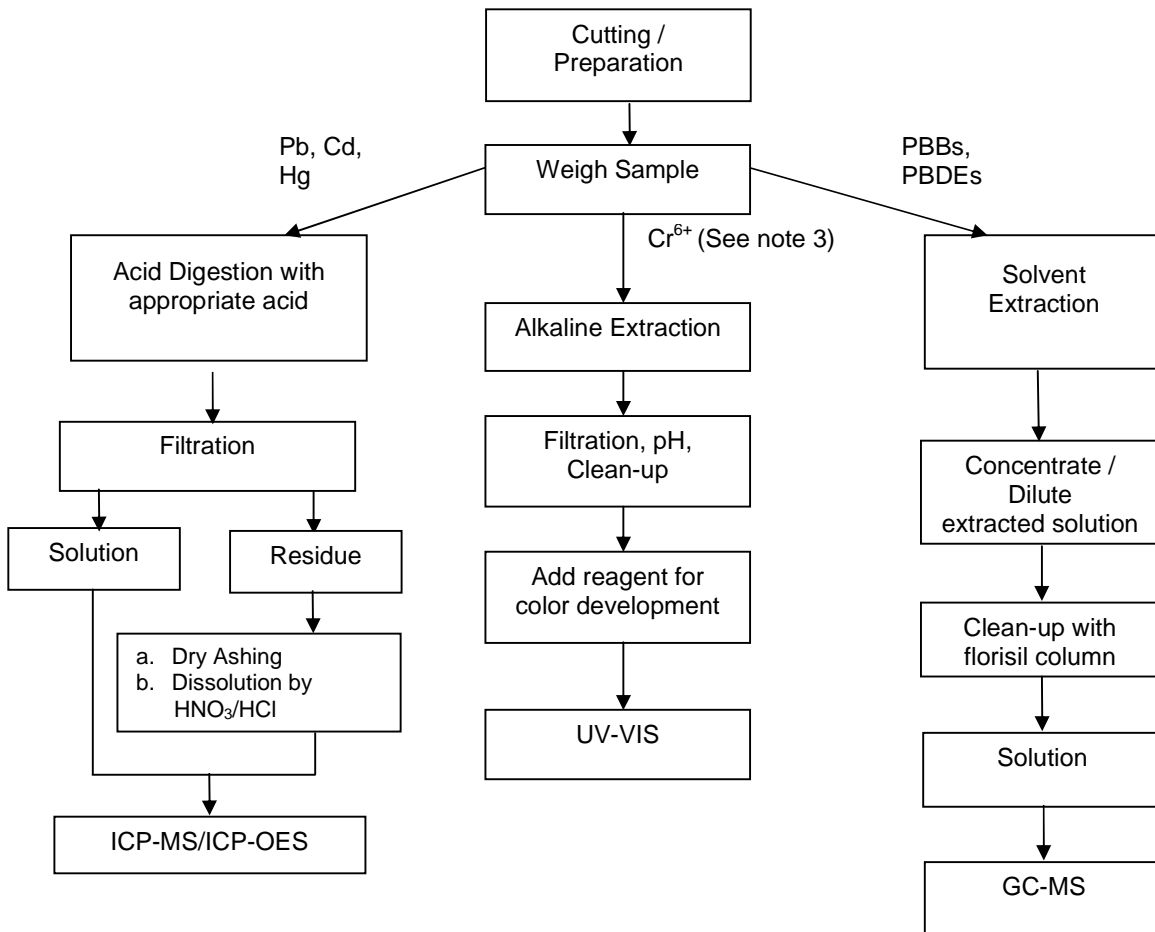
Sample Description:

1. **TSM Series**

Note :

1. ND = Not Detected = denoted less than reporting limit

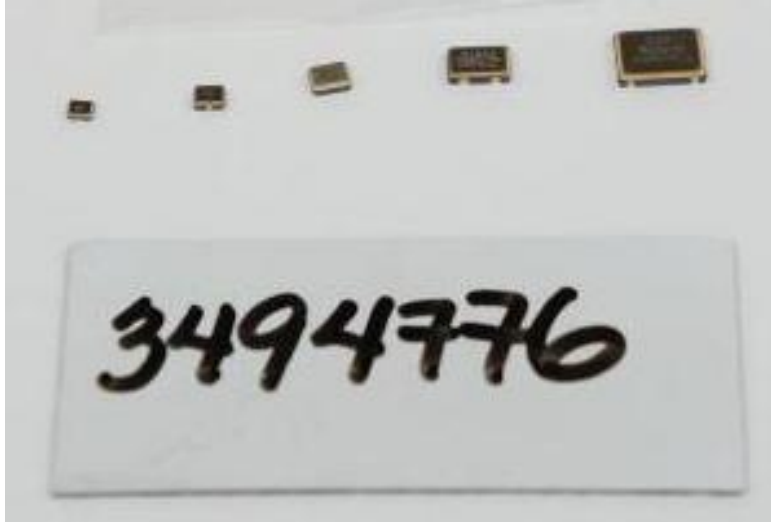
Flowchart for RoHS:



- Note :
1. For Cr(VI), spot test is adopted for metal sample.
 2. The Cd, Pb and Hg contents test on polymeric samples were dissolved totally by pre-conditioning method according to above flow chart.
 3. Cr⁶⁺ is performed only when total Cr is detected

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 45 days only."

Sample Photo:



SGS authenticates the photo on the original report only

*** End of Report ***

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 45 days only."