

## Test Report

No. 10100310/07 (8)

Date: 13 September 2007

Page 1 of 6

CTS Corporation (Singapore) Electronic Components  
14 Ang Mo Kio Industrial Park  
Singapore 569503

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

Sample Description : Group 9 – Oscillator (TCXO), Ceramic SMT Type  
532, 533 and variants

Sample Receiving Date : 05 September 2007  
Testing Period : 06 September 2007 to 13 September 2007

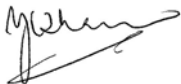
Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

---

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

Conclusion : Based on the performed tests on submitted samples, the results are **compliant with** the limits of RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of  
SGS Testing & Control Services Singapore Pte Ltd



Y.C. Tham  
Laboratory Manager

Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated: (a) the results shown in this document refer only to the sample(s) tested and (b) such sample(s) are retained for 30 days only. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

## Test Report

No. 10100310/07 (8)

Date: 13 September 2007

Page 2 of 6

### Test Result(s):

Sample Description : Group 9 – Oscillator (TCXO), Ceramic SMT Type 532 and variants

Test Item(s):	Unit	Method	Results	MDL	RoHS Limit
Cadmium(Cd)	mg/kg	With reference to US EPA Method 3051A. Analysis was performed by ICP/AES.	n.d.	2	100
Lead (Pb)	mg/kg		n.d.	2	1000
Mercury (Hg)	mg/kg		n.d.	2	1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to US EPA Method 3060A & 7196A. Analysis was performed by UV/Vis Spectrometry.	n.d.	2	1000
<b>Sum of PBBs</b>	mg/kg	With reference to EPA Method 3550C. Analysis was performed by GC/MS.	<b>n.d.</b>	-	1000
Monobromobiphenyl	mg/kg		n.d.	5	-
Dibromobiphenyl	mg/kg		n.d.	5	-
Tribromobiphenyl	mg/kg		n.d.	5	-
Tetrabromobiphenyl	mg/kg		n.d.	5	-
Hexabromobiphenyl	mg/kg		n.d.	5	-
Pentabromobiphenyl	mg/kg		n.d.	5	-
Heptabromobiphenyl	mg/kg		n.d.	5	-
Octabromobiphenyl	mg/kg		n.d.	5	-
Nonabromobiphenyl	mg/kg		n.d.	5	-
Decabromobiphenyl	mg/kg		n.d.	5	-
<b>Sum of PBDE (Mono to Nona)(Note 4)</b>	mg/kg		<b>n.d.</b>	-	1000
Monobromodiphenyl ether	mg/kg		n.d.	5	-
Dibromodiphenyl ether	mg/kg		n.d.	5	-
Tribromodiphenyl ether	mg/kg	n.d.	5	-	
Tetrabromodiphenyl ether	mg/kg	n.d.	5	-	
Pentabromodiphenyl ether	mg/kg	n.d.	5	-	
Hexabromodiphenyl ether	mg/kg	n.d.	5	-	
Heptabromodiphenyl ether	mg/kg	n.d.	5	-	
Octabromodiphenyl ether	mg/kg	n.d.	5	-	
Nonabromodiphenyl ether	mg/kg	n.d.	5	-	
Decabromodiphenyl ether	mg/kg	n.d.	5	-	
<b>Sum of PBDEs (Mono to Deca)</b>	mg/kg	<b>n.d.</b>	-	-	

- Note:
- (1) mg/kg = ppm
  - (2) n.d.= Not Detected = Denoted less than MDL
  - (3) MDL = Method Detection Limit
  - (4) Sum of Mono to NonaBDE & according to 2005/717/EC DecaBDE is exempt.
  - (5) “-“ = Not regulated
  - (6) “ --- “ = Not Conducted

Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated: (a) the results shown in this document refer only to the sample(s) tested and (b) such sample(s) are retained for 30 days only. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

## Test Report

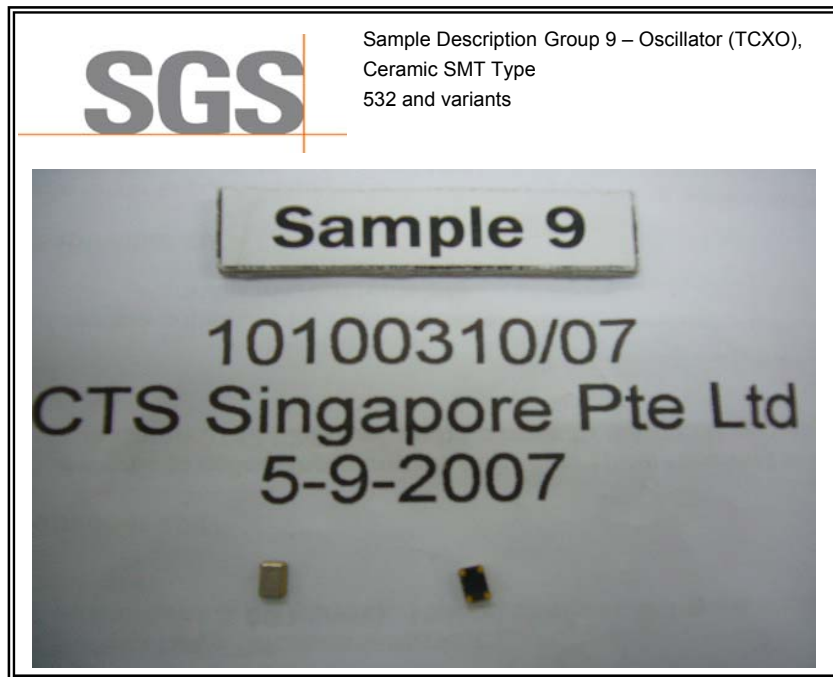
No. 10100310/07 (8)

Date: 13 September 2007

Page 3 of 6

Remarks: Sample received was totally dissolved by preconditioning & destroyed after the analysis.  
Lab Analyst: Christine Choy, Irene Li & Jessica Chong.

### Sample photo:



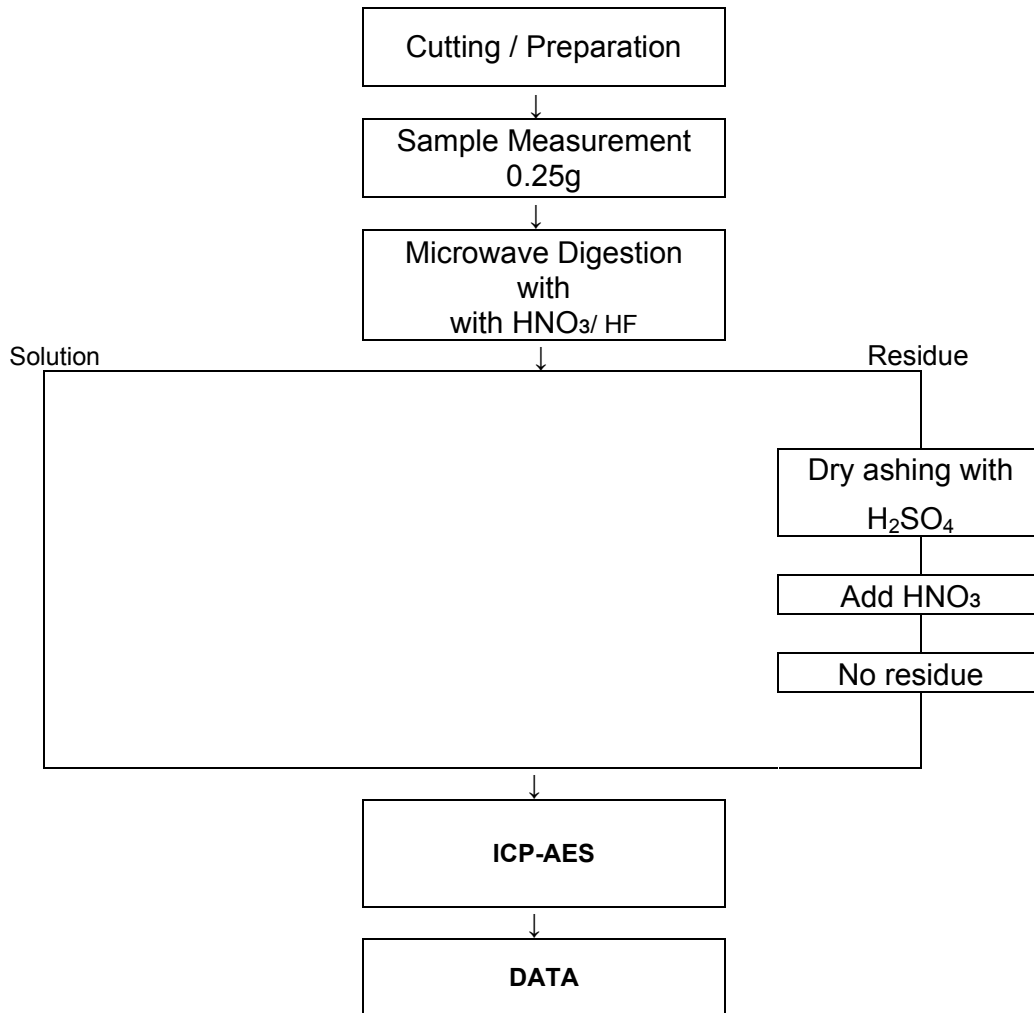
SGS authenticate the photo on original report only

Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated: (a) the results shown in this document refer only to the sample(s) tested and (b) such sample(s) are retained for 30 days only. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Testing & Control Services Singapore Pte Ltd | 26 Ayer Rajah Crescent #03-07 Singapore 139944 t +65 6379 0111 f+65 6777 2914 [www.sgs.com](http://www.sgs.com)

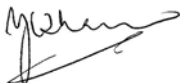
**Process Flow of US EPA 3051A/3052 (Hg, Cd, Pb)**



Lab Analyst : Jessica Chong

Sample received has been totally digested and dissolved by preconditioning method.

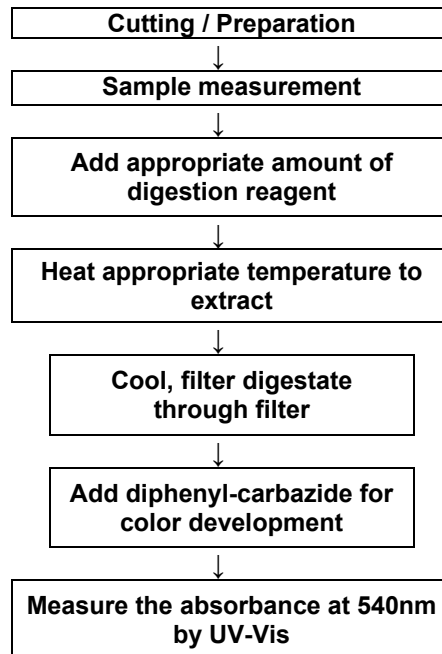
Signed for and on behalf of  
SGS Testing & Control Services Singapore Pte Ltd



Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated: (a) the results shown in this document refer only to the sample(s) tested and (b) such sample(s) are retained for 30 days only. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Y.C. Tham  
Laboratory Manager

**Process Flow of EPA 3060A, 7196A for analysis of Cr (VI)**

Lab Analyst : Christine Choy  
Sample received has been totally digested and dissolved by preconditioning method.

Signed for and on behalf of  
SGS Testing & Control Services Singapore Pte Ltd

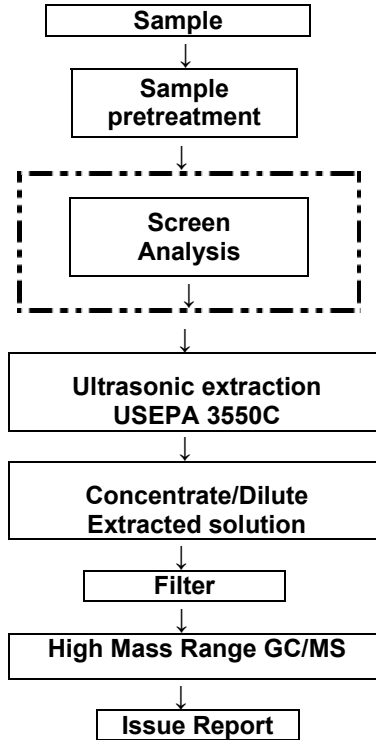
Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated: (a) the results shown in this document refer only to the sample(s) tested and (b) such sample(s) are retained for 30 days only. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

Y.C. Tham  
Laboratory Manager

### Process Flow of PBBs and PBDEs Flame Retardants by GC/MS

First Testing Process → Optional screen process ..... Confirmation process ...→



Lab Analyst : Irene Li

Sample received has been totally digested and dissolved by preconditioning method.

Signed for and on behalf of  
SGS Testing & Control Services Singapore Pte Ltd

Y.C. Tham  
Laboratory Manager

Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated: (a) the results shown in this document refer only to the sample(s) tested and (b) such sample(s) are retained for 30 days only. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.



**Test Report**

No. 10100310/07 (8)

Date: 13 September 2007

Page 7 of 6

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

Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

This document is issued by the Company subject to its General Conditions of Service printed overleaf or available on request and accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated: (a) the results shown in this document refer only to the sample(s) tested and (b) such sample(s) are retained for 30 days only. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Testing & Control Services Singapore Pte Ltd | 26 Ayer Rajah Crescent #03-07 Singapore 139944 t +65 6379 0111 f+65 6777 2914 [www.sgs.com](http://www.sgs.com)