

## TEST REPORT

Job No./Report No. TR192380 DATE : April 27 2010 Page 1 of 5

**TOWER SEMICONDUCTOR LTD**

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For the attention of **MOTI AMSALEM**

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

Sample Submitted By : TOWER SEMICONDUCTOR LTD  
Sample Description : Tower Semiconductor Silicon wafer 200mm 0.18 $\mu$   
Model No : Not Given  
LOT No : Not Given  
Client : Not Given  
End Use : Not Given  
Sample Receiving Date : April 14 2010  
Testing Period : April 14 2010~ April 19 2010  
Service Type : NORMAL  
Test Requested : Selected test (s) as requested by client.  
Test Method : Please refer to next page(s)  
Test Result(s) : Please refer to next page(s)  
Conclusion : Based on the performed tests on submitted samples, the result **complies with the RoHS Directive 2002/95/EC and its subsequent amendments.**

The test results relate only to the items tested only. The report shall not be reproduced except in full, without the written approval of the laboratory. Test reports without SGS seal and authorized person signature are invalid. The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95% the uncertainty evaluation has been carried out in accordance with UKAS/ISO 17025 requirements. This results do not include uncertainties. Opinions and interpretations expressed herein are outside of the scope of UKAS Accreditation. Tests marked (\*) in this Test Report are not included in the UKAS Accreditation Schedule for this Laboratory.

Issued in Istanbul  
For and on behalf of  
SGS Supervise Gözetme Etüd Kontrol Servisleri A.Ş.

Neslihan Erol Nazlı Şahin  
Lab. Customer Services Laboratory Manager  
Coordinator



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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

**Test Part Description :**

No.1: Tower Semiconductor Silicon wafer 200mm 0.18μ

| Test Item(s):              | Unit  | Test Method   | Results | MDL | Limit |
|----------------------------|-------|---|---------|-----|-------|
| Cadmium(Cd)                | mg/kg | With reference to IEC 62321:2008, and performed by ICP-MS | n.d.    | 2   | 100   |
| Lead (Pb)                  | mg/kg | With reference to IEC 62321:2008, and performed by ICP-MS | n.d.    | 2   | 1000  |
| Mercury (Hg)               | mg/kg | With reference to IEC 62321:2008, and performed by ICP-MS | n.d.    | 2   | 1000  |
| Hexavalent Chromium (CrVI) | mg/kg | With reference to IEC 62321:2008, and performed by UV-VIS | n.d.    | 2   | 1000  |

Note : (a) mg/kg = ppm ; 0.1wt% = 1000ppm

(b) n.d.= not detected

(c) MDL = Method Detection Limit

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No.1: Tower Semiconductor Silicon wafer 200mm 0.18 $\mu$ 

| Test Item(s):      | Unit  | Test Method  | Results | MDL | Limit |
|--------------------|-------|--|---------|-----|-------|
| <b>Sum of PBBs</b> | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d.    | -   | 1000  |
| Monobromobiphenyl  | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d.    | 5   | -     |
| Dibromobiphenyl    | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d.    | 5   | -     |
| Tribromobiphenyl   | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d.    | 5   | -     |
| Tetrabromobiphenyl | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d.    | 5   | -     |
| Hexabromobiphenyl  | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d.    | 5   | -     |
| Pentabromobiphenyl | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d.    | 5   | -     |
| Heptabromobiphenyl | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d.    | 5   | -     |
| Octabromobiphenyl  | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d.    | 5   | -     |
| Nonabromobiphenyl  | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d.    | 5   | -     |
| Decabromobiphenyl  | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d.    | 5   | -     |

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|                            |       |  |      |   |      |
|----------------------------|-------|--|------|---|------|
| <b>Sum of PBDEs</b>        | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d. | - | 1000 |
| Monobromodiphenyl ether    | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d. | 5 | -    |
| Dibromodiphenyl ether      | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d. | 5 | -    |
| Tribromodiphenyl ether     | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d. | 5 | -    |
| Tetrabromodiphenyl ether   | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d. | 5 | -    |
| Pentabromodiphenyl ether   | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d. | 5 | -    |
| Hexabromodiphenyl ether    | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d. | 5 | -    |
| Heptabromodiphenyl ether   | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d. | 5 | -    |
| Octabromodiphenyl ether    | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d. | 5 | -    |
| Nonabromodiphenyl ether    | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d. | 5 | -    |
| Decabromodiphenyl ether ## | mg/kg | With reference to IEC 62321:2008, and performed by GC-MS | n.d. | 5 | -    |

Note : (a) mg/kg = ppm ; 0.1wt% = 1000ppm

(b) n.d.= not detected

(c) MDL = Method Detection Limit

(d) ## = The exemption of DecaBDE in polymeric application according 2005/717/EC was overruled by the European Court of Justice by its decision of 01.04.2008. Subsequently DecaBDE will be included in the sum of PBDE after 01.07.2008

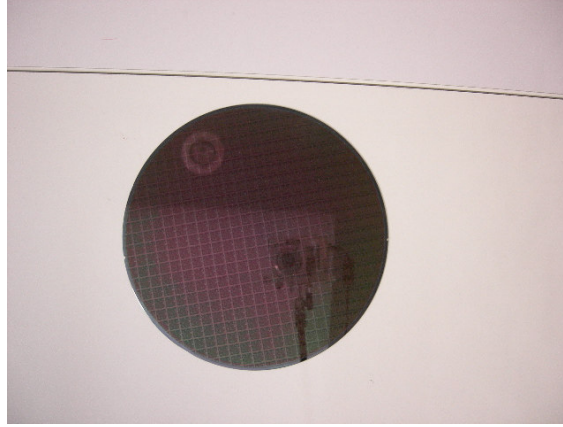
(f) " - " = Not regulated

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## PHOTO APPENDIX

**192380**

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

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