

Test Report

No. TJTC 0961446/CHEM

Date: August 10, 2009

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Vishay General Semiconductor China Limited
No.88 6th Avenue TEDA Tianjin P.R.China

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

Sample Item : DIODE CHIP
SGS Ref No. : 12075629-2.2
Material Spec : Ti/Ni/Ag
Vishay – PDD Raw Material P/N. : SKY 1
Supplier Code : VGST
Country of Origin : Taiwan

Sample Receiving Date : August 05, 2009
Testing Period : August 05 to August 10, 2009


Requestor : Lizzy Fan/Material Engineer
Approved : Brain Hurley/Quality Senior Manager

Test Requested : 1) To determine the Cadmium content in the submitted sample.
2) To determine the Lead content in the submitted sample.
3) To determine the Mercury content in the submitted sample.
4) To determine the Hexavalent Chromium content in the submitted sample.
5) To determine the PBBs(Polybrominated biphenyls) PBBEs(PBDEs)
(Polybrominated biphenyl ethers) content in the submitted sample.

Test method : With reference to IEC 62321 Ed.1: 2008
Procedures for the Determination of Levels of Regulated Substances in
Electrotechnical Products
1) Determination of Cadmium by ICP-AES/AAS
2) Determination of Lead by ICP-AES/AAS
3) Determination of Mercury by ICP-AES
4) Determination of Hexavalent Chromium by Colorimetric Method
5) Determination of PBBs and PBDEs by GC/MS

Test Results : Please refer to next pages

Signed for and on behalf of
SGS-CSTC Chemical Laboratory


Lucid Qi
Lab Manager

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Test results by chemical method

No.	Test Item(s)	Threshold Level	Unit	Method		MDL	Data A	Result A
1	Cadmium (Cd)	75	mg/kg	ICP-AES /AAS	IEC 62321 Ed.1: 2008 Sec. 10	2	n.d.	PASS
2	Lead (Pb)	1000	mg/kg	ICP-AES /AAS	IEC 62321 Ed.1: 2008 Sec. 10	2	n.d.	PASS
3	Mercury (Hg)	1000	mg/kg	ICP-AES	IEC 62321 Ed.1: 2008 Sec.7	2	n.d.	PASS
4	Hexavalent Chromium (CrVI) by alkaline extraction	1000	mg/kg	UV-VIS	IEC 62321 Ed.1: 2008 Annex C	2	n.d.	PASS
5	Polybrominated biphenyls (PBBs)	-	-	-	-	-	-	-
	Monobromobiphenyl	1000	mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	PASS
	Dibromobiphenyl		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Tribromobiphenyl		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Tetrabromobiphenyl		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Pentabromobiphenyl		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Hexabromobiphenyl		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Heptabromobiphenyl		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Octabromobiphenyl		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Nonabromobiphenyl		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Decabromobiphenyl		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Polybrominated biphenyl ethers (PBDEs)	-	-	-	-	-	-	-
	Monobromobiphenyl ether	1000	mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	PASS
	Dibromobiphenyl ether		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Tribromobiphenyl ether		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Tetrabromobiphenyl ether		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Pentabromobiphenyl ether		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Hexabromobiphenyl ether		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Heptabromobiphenyl ether		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
	Octabromobiphenyl ether		mg/kg	GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.	
Nonabromobiphenyl ether	mg/kg		GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.		
Decabromobiphenyl ether ##	mg/kg		GC/MS	IEC 62321 Ed.1: 2008 Annex A	5	n.d.		

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Test Part Description:

A. silvery/grey sheet

Note : (1) mg/kg = ppm

(2) n.d. = Not Detected

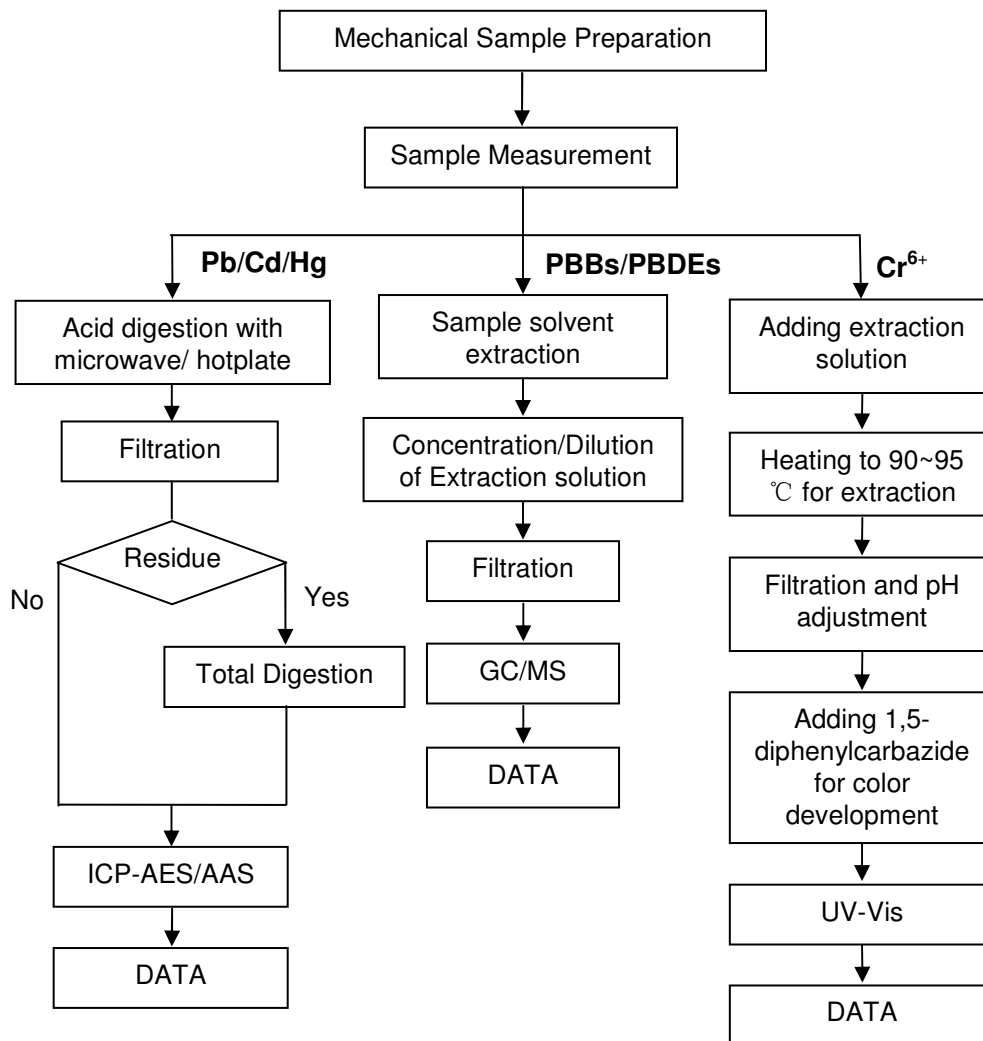
(3) MDL = Method Detection Limit

(4) ## =The exemption of DecaBDE in polymeric applications according to Decision 2005/717/EC was overruled by the European Court of Justice in its Judgment of 1 April 2008. Accordingly, DecaBDE is included in the sum of PBDE from 1 July 2008 onwards.

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Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

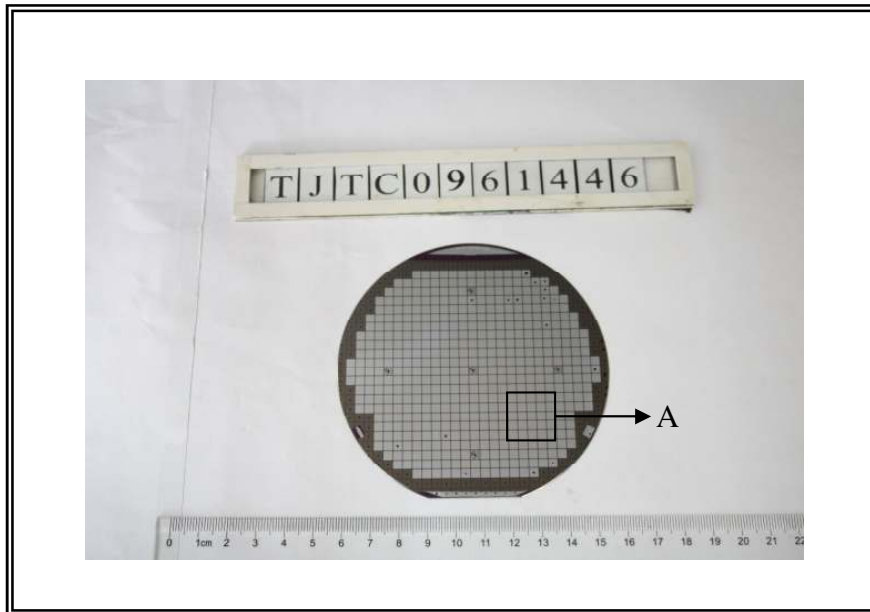
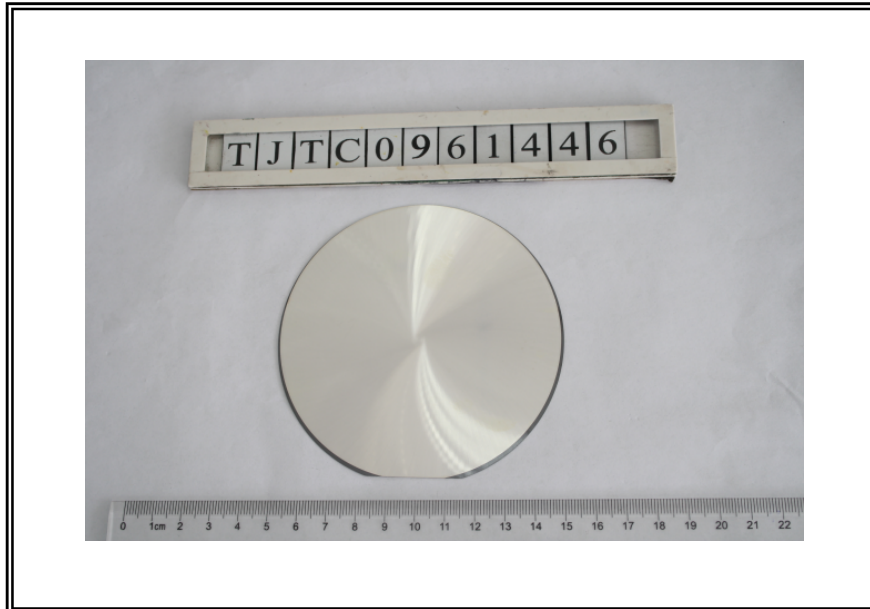
- 1) Operator : Amy Wang
- 2) Section Chief : Cindy Yin



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Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

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