

測試報告 Test Report

號碼(No.):CE/2012/34055

日期(Date):2012/03/20

頁數(Page): 1 of 6

NXP SEMICONDUCTORS LTD.

3F., NO. 19-8, SAN CHONG ROAD, NA GANG DISTRICT, TAIPEI 115, TAIWAN R. O. C.



以下測試樣品係由客戶送樣，且由客戶聲稱並經客戶確認如下 (The following samples was/were submitted and identified by/on behalf of the client as) :

樣品名稱(Sample Description) : SOT186, 226, 263, 399, 429, 533, 54, 78, 82 & SOD113, 59 and DPAK(SOT428), D2PAK(SOT404, 426, 427), LPAK(SOT669)
 收件日期(Sample Receiving Date) : 2012/03/16
 測試期間(Testing Period) : 2012/03/16TO2012/03/20

=====
 測試需求(Test Requested) : 參照 RoHS 2002/95/EC 及其修定指令要求. (In accordance with the RoHS Directive 2002/95/EC, and its amendment directives).

測試方法(Test Method) : 參考 IEC 62321: 2008 方法檢測. (With reference to IEC 62321: 2008. Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products).

- (1) 用感應耦合電漿原子發射光譜儀檢測鎘含量. / Determination of Cadmium by ICP-AES.
- (2) 用感應耦合電漿原子發射光譜儀檢測鉛含量. / Determination of Lead by ICP-AES.
- (3) 用感應耦合電漿原子發射光譜儀檢測汞含量. / Determination of Mercury by ICP-AES.
- (4) 用 UV-VIS 檢測六價鉻含量. / Determination of Hexavalent Chromium by UV/Vis Spectrometry.
- (5) 用 Spot test / boiling water extraction 方法檢測六價鉻含量. / Determination of Hexavalent Chromium by Spot test / boiling water extraction Method.
- (6) 以氣相層析儀/質譜儀檢測多溴聯苯和多溴聯苯醚含量. / Determination of PBB and PBDE by GC/MS.

測試結果(Test Results) : 請見下一頁 (Please refer to next pages).

Chenyu Kung / Operation Manager
 Signed for and on behalf of
SGS TAIWAN LTD.
 Chemical Laboratory – Taipei

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。
 This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report 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. 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.

測試報告

Test Report

號碼(No.): CE/2012/34055

日期(Date): 2012/03/20

頁數(Page): 2 of 6

NXP SEMICONDUCTORS LTD.

3F., NO. 19-8, SAN CHONG ROAD, NA GANG DISTRICT, TAIPEI 115, TAIWAN R. O. C.



測試結果(Test Results) 單位(Unit): mg/kg

測試項目 (Test Items)	測試方法 Method (Refer to)	結果 (Result)		方法偵測 極限值 (MDL)
		No.1	No.2	
鎘 / Cadmium (Cd)	(1)	n.d.	n.d.	2
鉛 / Lead (Pb)	(2)	n.d.	7	2
汞 / Mercury (Hg)	(3)	n.d.	n.d.	2
六價鉻 / Hexavalent Chromium Cr(VI) by alkaline extraction	(4)	n.d.	---	2
六價鉻 / Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	(5)	---	Negative	See Note 4
多溴聯苯總和 / Sum of PBBs	(6)	n.d.	---	-
一溴聯苯 / Monobromobiphenyl		n.d.	---	5
二溴聯苯 / Dibromobiphenyl		n.d.	---	5
三溴聯苯 / Tribromobiphenyl		n.d.	---	5
四溴聯苯 / Tetrabromobiphenyl		n.d.	---	5
五溴聯苯 / Pentabromobiphenyl		n.d.	---	5
六溴聯苯 / Hexabromobiphenyl		n.d.	---	5
七溴聯苯 / Heptabromobiphenyl		n.d.	---	5
八溴聯苯 / Octabromobiphenyl		n.d.	---	5
九溴聯苯 / Nonabromobiphenyl		n.d.	---	5
十溴聯苯 / Decabromobiphenyl		n.d.	---	5
多溴聯苯醚總和 / Sum of PBDEs		n.d.	---	-
一溴聯苯醚 / Monobromodiphenyl ether		n.d.	---	5
二溴聯苯醚 / Dibromodiphenyl ether		n.d.	---	5
三溴聯苯醚 / Tribromodiphenyl ether		n.d.	---	5
四溴聯苯醚 / Tetrabromodiphenyl ether		n.d.	---	5
五溴聯苯醚 / Pentabromodiphenyl ether		n.d.	---	5
六溴聯苯醚 / Hexabromodiphenyl ether		n.d.	---	5
七溴聯苯醚 / Heptabromodiphenyl ether		n.d.	---	5
八溴聯苯醚 / Octabromodiphenyl ether		n.d.	---	5
九溴聯苯醚 / Nonabromodiphenyl ether	n.d.	---	5	
十溴聯苯醚 / Decabromodiphenyl ether	n.d.	---	5	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。

This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report 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. 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.

測試報告

Test Report

號碼(No.): CE/2012/34055

日期(Date): 2012/03/20

頁數(Page): 3 of 6

NXP SEMICONDUCTORS LTD.

3F., NO. 19-8, SAN CHONG ROAD, NA GANG DISTRICT, TAIPEI 115, TAIWAN R. O. C.



測試部位描述 (TEST PART DESCRIPTION):

- NO.1 : 本體 (BODY)
 NO.2 : 銀色金屬(包含鍍層) (SILVER COLORED METAL(INCLUDING THE PLATING LAYER))

備註(Note):

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected (未檢出)
3. MDL = Method Detection Limit (方法偵測極限值)
4. Spot-test:

Negative = Absence of Cr(VI) coating / surface layer(鍍層中偵測不到六價鉻),

Positive = Presence of Cr(VI) coating / surface layer(鍍層中偵測到六價鉻);

The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed.

(當該測項無法確認時, 測試樣品可藉由boiling-water-extraction測試方法進一步確認)

Boiling-water-extraction:

Negative = Absence of Cr(VI) coating / surface layer(鍍層中偵測不到六價鉻),

Positive = Presence of Cr(VI) coating / surface layer(鍍層中偵測到六價鉻);

the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

該溶液濃度 \geq 0.02 mg/kg with 50 cm² (sample surface area)

5. "-" = Not Regulated (無規格值)
6. "---" = Not Conducted (未測項目)
7. 樣品的測試是基於申請人要求混合測試, 報告中的混合測試結果不代表其中個別單一材質的含量。
(The samples was/were analyzed on behalf of the applicant as mixing sample in one testing.
The above results was/were only given as the informality value).

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明, 此報告結果僅對測試之樣品負責。本報告未經本公司書面許可, 不可部分複製。

This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report 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. 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.

測試報告 Test Report

號碼(No.): CE/2012/34055

日期(Date): 2012/03/20

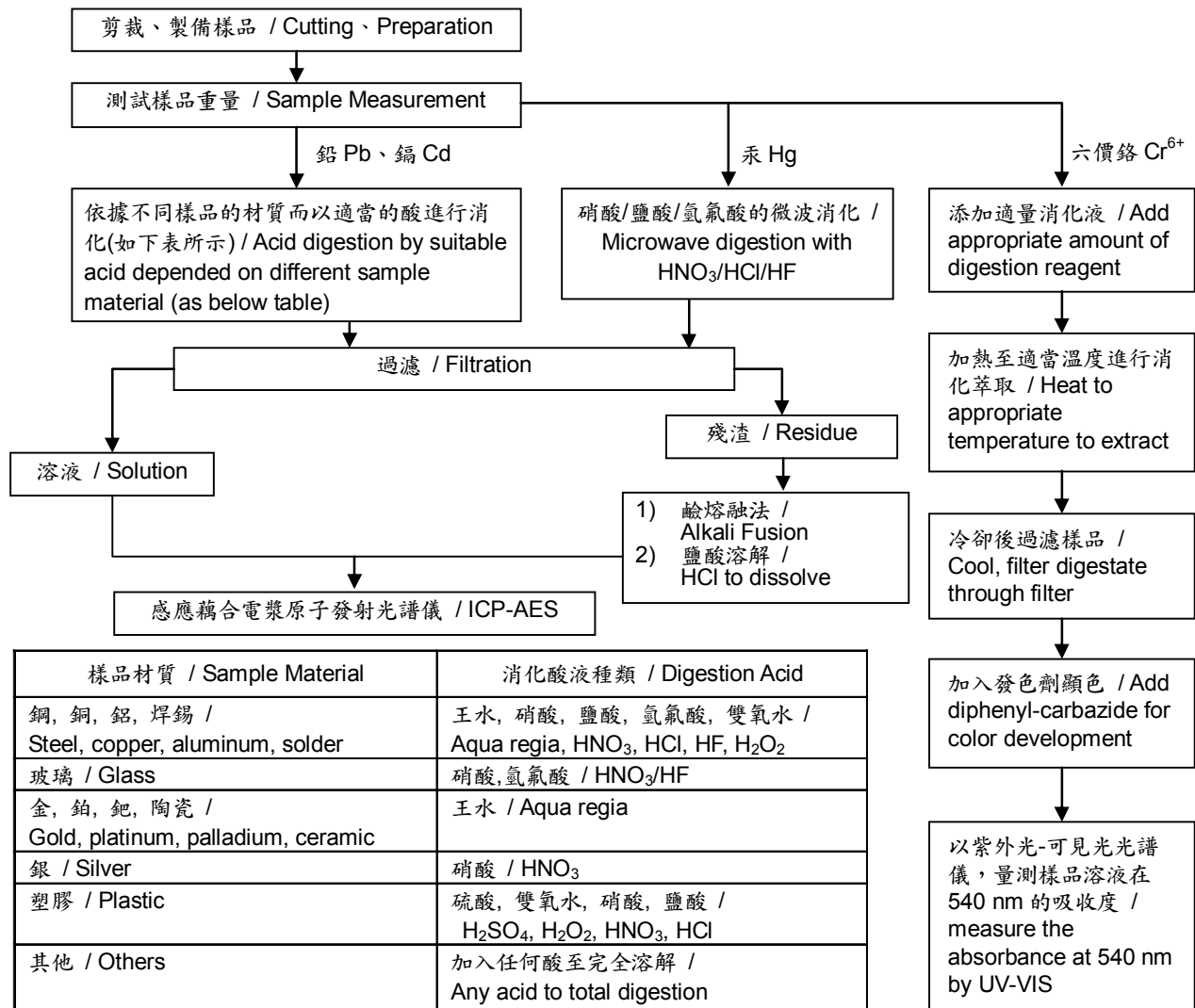
頁數(Page): 4 of 6

NXP SEMICONDUCTORS LTD.



3F., NO. 19-8, SAN CHONG ROAD, NA GANG DISTRICT, TAIPEI 115, TAIWAN R. O. C.

- 1) 根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) 測試人員：楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人：張啓興 / Name of the person in charge of measurement: Troy Chang



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。

This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained herein 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. 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.

測試報告 Test Report

號碼(No.): CE/2012/34055

日期(Date): 2012/03/20

頁數(Page): 5 of 6

NXP SEMICONDUCTORS LTD.

3F., NO. 19-8, SAN CHONG ROAD, NA GANG DISTRICT, TAIPEI 115, TAIWAN R. O. C.



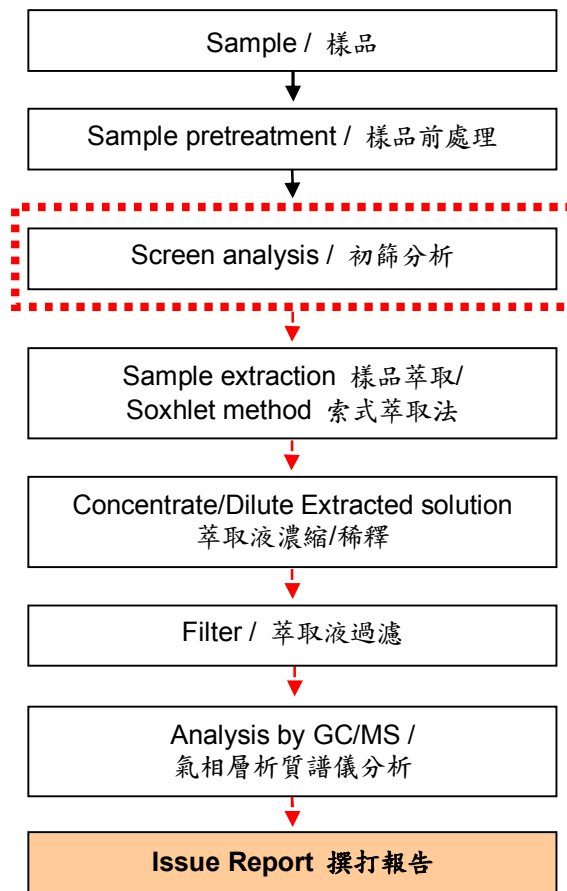
多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

- 1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen

初次測試程序 / First testing process ———→

選擇性篩檢程序 / Optional screen process→

確認程序 / Confirmation process - - - ->



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。

This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report 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. 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.

測試報告 Test Report

號碼(No.): CE/2012/34055

日期(Date): 2012/03/20

頁數(Page): 6 of 6

NXP SEMICONDUCTORS LTD.

3F., NO. 19-8, SAN CHONG ROAD, NA GANG DISTRICT, TAIPEI 115, TAIWAN R. O. C.



** 報告結尾(End of Report) **

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。

This Test Report is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report 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. 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.