

### **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

```
頁數(Page):1 of 47
```

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by/on behalf of the applicant as):

送樣廠商(Sample Submitted By) 樣品名稱(Sample Name) 樣品型號(Style/Item No.)	: : :	台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD) LEAD FRAME C7025
收件日(Sample Receiving Date) 測試期間(Testing Period)	:	11-Jun-2021 11-Jun-2021 to 21-Jun-2021
測試需求(Test Requested)  :	(1)	依據客戶指定,參考RoHS 2011/65/EU Annex II及其修訂指令(EU) 2015/863測試 鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP, BBP, DEHP, DIBP。 (As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).)
測試結果(Test Results) : 結 論(Conclusion) :	(2) (1)	其他測試項目請見下一頁。 (Please refer to next pages for the other item(s).) 請參閱下一頁 (Please refer to following pages.) 根據客戶所提供的樣品,其鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP, BBP, DEHP, DIBP的測試結果符合RoHS 2011/65/EU Annex II暨其修訂指令(EU) 2015/863之限值要求。 (Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863

amending Annex II to Directive 2011/65/EU.)







This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> 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 instruction, 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.



# **Test Report**

日期(Date): 21-Jun-2021

頁數(Page): 2 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

號碼(No.): EKR21601093

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

#### 測試部位敘述 (Test Part Description)

No.1 : 銅色/銀色金屬 (COPPER/SILVER COLORED METAL)

#### 測試結果 (Test Results)

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
鎘 (Cd) (Cadmium (Cd)) (CAS No.: 7440-	參考IEC 62321-5: 2013,以感應耦合電漿	mg/kg	2	n.d.	100
43-9)	發射光譜儀分析。(With reference to IEC				
	62321-5: 2013, analysis was performed				
	by ICP-OES.)				
鉛 (Pb) (Lead (Pb)) (CAS No.: 7439-92-1)	參考IEC 62321-5: 2013 · 以感應耦合電漿	mg/kg	2	n.d.	1000
	發射光譜儀分析。(With reference to IEC				
	62321-5: 2013, analysis was performed				
<b>T</b> (1) X (1) <b>X</b> (2)	by ICP-OES.)	4	-		1000
汞 (Hg) (Mercury (Hg)) (CAS No.: 7439-	參考IEC 62321-4: 2013 + AMD1: 2017	mg/kg	2	n.d.	1000
97-6)	以感應耦合電漿發射光譜儀分析。(With				
	reference to IEC 62321-4: 2013+ AMD1:				
	2017, analysis was performed by ICP-				
 六價鉻 (Hexavalent Chromium) Cr(VI)	OES.) 參考IEC 62321-7-1: 2015 · 以紫外光-可見		0.1	n.d.	
(CAS No.: 18540-29-9) (#2)	参考IEC 62321-7-1. 2015 · 以系外元-可兑 光分光光度計分析。(With reference to	µg/cm²	0.1	n.a.	-
(CAS NO., 18540-29-9) (#2)	尼方元元度計分析。(With reference to IEC 62321-7-1: 2015, analysis was				
	performed by UV-VIS.)				
 一溴聯苯 (Monobromobiphenyl)	performed by 0 v - vis.)	mg/kg	5	n.d.	_
二溴聯苯 (Dibromobiphenyl)		mg/kg	5	n.d.	_
三溴聯苯 (Tribromobiphenyl)		mg/kg	5	n.d.	-
四溴聯苯 (Tetrabromobipenyl)		mg/kg	5	n.d.	-
五溴聯苯 (Pentabromobiphenyl)	參考IEC 62321-6: 2015 · 以氣相層析儀/質	mg/kg	5	n.d.	-
六溴聯苯 (Hexabromobiphenyl)	譜儀分析。(With reference to IEC 62321 6: 2015, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
七溴聯苯 (Heptabromobiphenyl)		mg/kg	5	n.d.	-
八溴聯苯 (Octabromobiphenyl)		mg/kg	5	n.d.	-
九溴聯苯 (Nonabromobiphenyl)	] [	mg/kg	5	n.d.	-
十溴聯苯 (Decabromobiphenyl)	]	mg/kg	5	n.d.	-
多溴聯苯總和 (Sum of PBBs)		mg/kg	-	n.d.	1000

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



# **Test Report**

號碼(No.): EKR21601093

日期(Date): 21-Jun-2021

頁數(Page): 3 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
				No.1	
一溴聯苯醚 (Monobromodiphenyl ether)		mg/kg	5	n.d.	-
二溴聯苯醚 (Dibromodiphenyl ether)		mg/kg	5	n.d.	-
三溴聯苯醚 (Tribromodiphenyl ether)		mg/kg	5	n.d.	-
四溴聯苯醚 (Tetrabromodiphenyl ether)	 ·參考IEC 62321-6: 2015 · 以氣相層析儀/質	mg/kg	5	n.d.	-
五溴聯苯醚 (Pentabromodiphenyl ether)	警告EC 02321-0. 2013,以氣怕層術展/頁 譜儀分析。(With reference to IEC 62321-	mg/kg	5	n.d.	I
六溴聯苯醚 (Hexabromodiphenyl ether)	6: 2015, analysis was performed by	mg/kg	5	n.d.	-
七溴聯苯醚 (Heptabromodiphenyl ether)	GC/MS.)	mg/kg	5	n.d.	-
八溴聯苯醚 (Octabromodiphenyl ether)		mg/kg	5	n.d.	-
九溴聯苯醚 (Nonabromodiphenyl ether)		mg/kg	5	n.d.	-
十溴聯苯醚 (Decabromodiphenyl ether)		mg/kg	5	n.d.	-
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.	1000
氟 (F) (Fluorine (F)) (CAS No.: 14762-94-		mg/kg	50	n.d.	-
8)					
氯 (Cl) (Chlorine (Cl)) (CAS No.: 22537-	參考BS EN 14582: 2016 · 以離子層析儀分	mg/kg	50	n.d.	-
15-1)	析。(With reference to BS EN 14582:				
溴 (Br) (Bromine (Br)) (CAS No.: 10097-	2016, analysis was performed by IC.)	mg/kg	50	n.d.	-
32-2)					
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.	-
全氟辛酸 (PFOA)及其鹽類		mg/kg	0.01	n.d.	-
(Perfluorooctanoic acid (PFOA) and it's	参考CEN/TS 15968: 2010 · 以液相層析串				
salt) (CAS No.: 335-67-1 and its salts)	聯質譜儀分析。(With reference to				
全氟辛烷磺酸(PFOS)及其鹽類	Wg間展分析 (With reference to CEN/TS 15968: 2010, analysis was	mg/kg	0.01	n.d.	-
(Perfluorooctane sulfonate (PFOS) and	performed by LC/MS/MS.)				
it's salt) (CAS No.: 1763-23-1 and its					
salts)					
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440-	參考US EPA 3052: 1996 · 以感應耦合電漿	mg/kg	2	n.d.	-
36-0)	發射光譜儀分析。(With reference to US				
	EPA 3052: 1996, analysis was performed				
	by ICP-OES.)		2.4		
三氧化二銻(Sb <sub>2</sub> O <sub>3</sub> ) (Antimony trioxide	由銻結果計算得之。(Calculated from the	mg/kg	2▲	n.d.	-
(Sb <sub>2</sub> O <sub>3</sub> )) (CAS No.: 1309-64-4)	result of Antimony.)				

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. 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 instruction, 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.



# **Test Report**

日期(Date): 21-Jun-2021

頁數(Page): 4 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

號碼(No.): EKR21601093

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440- 41-7)	參考US EPA 3052: 1996 · 以感應耦合電漿 發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-
氧化鈹 (BeO) (Beryllium oxide (BeO)) (CAS No.: 1304-56-9)	由鈹結果計算得之。(Calculated from the result of Beryllium.)	mg/kg	2▲	n.d.	-
砷 (As) (Arsenic (As)) (CAS No.: 7440- 38-2)	參考US EPA 3052: 1996 · 以感應耦合電漿 發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-
磷 (P) (Phosphorus (P)) (CAS No.: 7723- 14-0)	參考US EPA 3052: 1996,以感應耦合電漿 發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP)) (CAS No.: 85-68-7)		mg/kg	50	n.d.	1000
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP)) (CAS No.: 84-74-2)		mg/kg	50	n.d.	1000
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP)) (CAS No.: 84-69-5)		mg/kg	50	n.d.	1000
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di- (2-ethylhexyl) phthalate (DEHP)) (CAS No.: 117-81-7)	參考IEC 62321-8: 2017 · 以氣相層析儀/質	mg/kg	50	n.d.	1000
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12- 0, 68515-48-0)	譜儀分析。(With reference to IEC 62321- 8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
鄰苯二甲酸二異癸酯 (DIDP) (Diisodecyl phthalate (DIDP)) (CAS No.: 26761-40- 0, 68515-49-1)		mg/kg	50	n.d.	-
鄰苯二甲酸二正辛酯 (DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)		mg/kg	50	n.d.	-
鄰苯二甲酸二正戊酯 (DNPP) (Di-n- pentyl phthalate (DNPP)) (CAS No.: 131-18-0)		mg/kg	50	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date)

日期(Date): 21-Jun-2021

頁數(Page): 5 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
鄰苯二甲酸二正己酯 (DNHP) (Di-n-hexyl phthalate (DNHP)) (CAS No.: 84-75-3)		mg/kg	50	n.d.	-
鄰苯二甲酸二庚酯 (DHpP) (Diheptyl		mg/kg	50	n.d.	-
phthalate (DHpP)) (CAS No.: 3648-21- 3)					
鄰苯二甲酸二(2-甲氧基乙基)酯 (DMEP)		mg/kg	50	n.d.	-
(Bis-(2-methoxyethyl) phthalate (DMEP)) (CAS No.: 117-82-8)	參考IEC 62321-8: 2017 · 以氣相層析儀/質 譜儀分析。(With reference to IEC 62321-				
鄰苯二甲酸二(C7-11支鏈與直鏈)烷基酯 (DHNUP) (1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear	8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	-
alkyl esters (DHNUP)) (CAS No.: 68515- 42-4)					
1,2-苯二酸-二(C6-8支鏈)烷基酯(富C7) (DIHP) (1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich		mg/kg	50	n.d.	-
(DIHP)) (CAS No.: 71888-89-6)					
多氯聯苯 (PCBs) (Polychlorinated	參考US EPA 3550C: 2007 · 以氣相層析儀/	mg/kg	0.5	n.d.	-
biphenyls (PCBs))	質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)				
多氯奈 (PCNs) (Polychlorinated	参考US EPA 3550C: 2007 · 以氣相層析儀/	mg/kg	5	n.d.	-
naphthalene (PCNs))	質譜儀分析。(With reference to US EPA				
	3550C: 2007, analysis was performed by GC/MS.)				
多氯三聯苯 (PCTs) (Polychlorinated	參考US EPA 3550C: 2007 · 以氣相層析儀/	mg/kg	0.5	n.d.	-
terphenyls (PCTs))	質譜儀分析。(With reference to US EPA				
	3550C: 2007, analysis was performed by GC/MS.)				
短鏈氯化石蠟(C10-C13) (SCCP) (Short	參考ISO 18219: 2015 · 以氣相層析儀/質	mg/kg	50	n.d.	-
Chain Chlorinated Paraffins(C10-C13)	譜儀分析。(With reference to ISO 18219:				
(SCCP)) (CAS No.: 85535-84-8)	2015, analysis was performed by GC/MS.)				

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



# **Test Report**

日期(Date): 21-Jun-2021

頁數(Page): 6 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

號碼(No.): EKR21601093

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
三丁基錫 (TBT) (Tributyl tin (TBT))	參考ISO 17353: 2004 · 以氣相層析儀/火 焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
氧化雙三丁基錫 (TBTO) (Bis(tributyltin) oxide (TBTO)) (CAS No.: 56-35-9)	由三丁基錫測試結果計算得之。 (Calculated from the result of Tributyl Tin (TBT).)	mg/kg	0.03	n.d.	-
三苯基錫 (TPhT) (Triphenyl tin (TPhT))	參考ISO 17353: 2004 · 以氣相層析儀/火 焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
二辛基錫 (DOT) (Dioctyl tin (DOT))	參考ISO 17353: 2004,以氣相層析儀/火 焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
二丁基錫 (DBT) (Dibutyl tin (DBT))	參考ISO 17353: 2004,以氣相層析儀/火 焰光度偵測器分析。(With reference to ISO 17353: 2004, analysis was performed by GC/FPD.)	mg/kg	0.03	n.d.	-
石綿 (Asbestos)					
陽起石綿 (Actinolite) (CAS No.: 77536- 66-4)	会 北FDA 600/D 02/116 1002 い 上 映 EF	%	-	Negative	-
褐石綿/鐵石綿 (Amosite) (CAS No.: 12172-73-5)	參考EPA 600/R-93/116: 1993,以立體顯 微鏡(SM)與分散染色式偏光顯微鏡(DS-	%	-	Negative	-
斜方角閃石綿 (Anthophyllite) (CAS No.: 77536-67-5)	PLM)及X光繞射光譜分析法(XRD)分析。 (With reference to EPA 600/R-93/116:	%	-	Negative	-
白石綿/溫石綿 (Chrysotile) (CAS No.: 12001-29-5)	1993, analysis was performed by Stereo Microscope (SM), Dispersion Staining	%	-	Negative	-
青石綿 (Crocidolite) (CAS No.: 12001- 28-4)	Polarized Light Microscope (DS-PLM) and X-ray Diffraction Spectrometer	%	-	Negative	-
透閃石綿 (Tremolite) (CAS No.: 77536- 68-6)	(XRD).)	%	-	Negative	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

日期(Date): 21-Jun-2021

頁數(Page): 7 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

號碼(No.): EKR21601093

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
聚氯乙烯 (Polyvinyl chloride) (PVC)	參考ASTM E1252: 2013 · 以傅立葉轉換紅 外線光譜儀及焰色法分析。(With reference to ASTM E1252: 2013, analysis	**	-	No.1 Negative	-
yl-4,6-di-tert-butylphenol (UV-320))	was performed by FT-IR and Flame Test.) 參考US EPA 3550C: 2007 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by	mg/kg	5	n.d.	-
(CAS No.: 3846-71-7) 四溴雙酚 A (TBBP-A) (Tetrabromobisphenol A (TBBP-A)) (CAS No.: 79-94-7)	GC/MS.) 參考RSTS-E&E-121、以液相層析儀/質譜 儀分析。(With reference to RSTS-E&E- 121, analysis was performed by LC/MS.)	mg/kg	10	n.d.	-
富馬酸二甲酯 (DMFu) (Dimethyl fumarate (DMFu)) (CAS No.: 624-49-7)	參考US EPA 3550C: 2007 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.)	mg/kg	0.1	n.d.	-
六溴環十二烷及所有主要被辨別出的異構 物(HBCDD) (α- HBCDD, β- HBCDD, γ- HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α- HBCDD, β- HBCDD, γ- HBCDD)) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	參考IEC 62321: 2008 · 以氣相層析儀/質譜 儀分析。(With reference to IEC 62321: 2008, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
甲醛 (Formaldehyde) (CAS No.: 50-00- 0)	參考ISO 17226-1: 2021 · 以液相層析儀/ 二極體陣列偵測器分析。(With reference to ISO 17226-1: 2021, analysis was performed by LC/DAD.)	mg/kg	3	n.d.	-
紅磷 (Red Phosphorus)	以熱裂解-氣相層析儀/質譜儀分析。 (Analysis was performed by Pyrolyzer- GC/MS.)	**	-	Negative	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

日期(Date): 21-Jun-2021

頁數(Page): 8 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

號碼(No.): EKR21601093

測試項目	測試方法	單位	MDL	結果	限值
(Test Items)	(Method)	(Unit)		(Result) No.1	(Limit)
				INO.1	
偶氮染料 (AZO Dyes)		4			
4-氨基聯苯 (4-Aminobiphenyl) (CAS	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
No.: 92-67-1)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)		-		
4,4'-亞甲基二-鄰-苯胺 (4,4'-	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
Methylenedi-o-toluidine) (CAS No.:	質譜儀及高效液相層析儀/二極體陣列偵測				
838-88-0)	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
6-甲氧基-間-甲苯胺 (6-Methoxy-m-	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
toluidine) (CAS No.: 120-71-8)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
4,4'-亞甲基-雙(2-氯苯胺) (4,4'-	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
Methylene-bis-(2-chloro-Aniline)) (CAS	質譜儀及高效液相層析儀/二極體陣列偵測				
No.: 101-14-4)	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
鄰-胺基偶氮甲苯 (o-Aminoazotoluene)	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
(CAS No.: 97-56-3)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
4-甲氧基-間-苯二胺 / 2,4-二胺基苯甲醚	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
(4-Methoxy-m-phenylenediamine /	質譜儀及高效液相層析儀/二極體陣列偵測				
2,4-Diaminoanisole) (CAS No.: 615-05-	器分析。(With reference to EN ISO				
4)	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

日期(Date): 21-Jun-2021

頁數(Page): 9 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

號碼(No.): EKR21601093

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
4,4'氨基苯甲烷 (4,4'-	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
Methylenedianiline) (CAS No.: 101-77-	質譜儀及高效液相層析儀/二極體陣列偵測				
9)	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
4-氯鄰甲苯胺 (4-chloro-o-toluidine)	參考EN ISO 14362-1: 2017,以氣相層析	mg/kg	3	n.d.	-
(CAS No.: 95-69-2)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
聯苯胺 (Benzidine) (CAS No.: 92-87-5)	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
3,3'-二氯聯苯胺 (3,3'-	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
Dichlorobenzidine) (CAS No.: 91-94-1)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
3,3'-二甲氧基聯苯胺 (3,3'-	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
Dimethoxybenzidine) (CAS No.: 119-	質譜儀及高效液相層析儀/二極體陣列偵測				
90-4)	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
3,3'-二甲基聯苯胺 (3,3'-	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
Dimethylbenzidine) (CAS No.: 119-93-	質譜儀及高效液相層析儀/二極體陣列偵測				
7)	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				
4,4'-二胺基二苯醚 (4,4'-Oxydianiline)	參考EN ISO 14362-1: 2017 · 以氣相層析	mg/kg	3	n.d.	-
(CAS No.: 101-80-4)	質譜儀及高效液相層析儀/二極體陣列偵測				
	器分析。(With reference to EN ISO				
	14362-1: 2017, analysis was performed				
	by GC/MS and HPLC/DAD.)				

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

日期(Date): 21-Jun-2021

頁數(Page): 10 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

號碼(No.): EKR21601093

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
4,4'-硫代雙苯胺 (4,4'-Thiodianiline) (CAS No.: 139-65-1)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
鄰-甲苯胺 (o-Toluidine) (CAS No.: 95- 53-4)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	_
2,4-二氨基甲苯 (2,4-Diaminotoluene) (CAS No.: 95-80-7)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
2,4,5-三甲基苯胺 (2,4,5- Trimethylaniline) (CAS No.: 137-17-7)	參考EN ISO 14362-1: 2017,以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
鄰-甲氧基苯胺 (2-Methoxyaniline) (CAS No.: 90-04-0)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
4-氨基偶氮苯 (4-AAB) (4- Aminoazobenzene(4-AAB)) (CAS No.: 60-09-3)	參考EN ISO 14362-1: 2017 and EN ISO 14362-3: 2017 · 以氣相層析質譜儀及高效液相 層析儀/三極體陣列偵測器分析。(With reference to EN ISO 14362-1: 2017 and EN ISO 14362-3: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
2,4-二甲基苯胺 (2,4-Xylidine) (CAS No.: 95-68-1)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

日期(Date): 21-Jun-2021

頁數(Page): 11 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

號碼(No.): EKR21601093

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
2,6-二甲基苯胺 (2,6-Xylidine) (CAS No.: 87-62-7)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
2-萘胺 (2-Naphthylamine) (CAS No.: 91-59-8)	參考EN ISO 14362-1: 2017,以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
5-硝基-鄰-甲苯胺 (5-Nitro-o-toluidine) (CAS No.: 99-55-8)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	_
4-氯苯胺 (4-Chloroaniline) (CAS No.: 106-47-8)	參考EN ISO 14362-1: 2017 · 以氣相層析 質譜儀及高效液相層析儀/二極體陣列偵測 器分析。(With reference to EN ISO 14362-1: 2017, analysis was performed by GC/MS and HPLC/DAD.)	mg/kg	3	n.d.	-
氟氯碳化物 (Chlorofluorocarbons) (CFCs)					
CFC-11 (CAS No.: 75-69-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-12 (CAS No.: 75-71-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-13 (CAS No.: 75-72-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 12 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
CFC-111 (CAS No.: 354-56-3)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-112 (CAS No.: 76-12-0)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-113 (CAS No.: 76-13-1)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-114 (CAS No.: 76-14-2)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-115 (CAS No.: 76-15-3)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-211 (CAS No.: 422-78-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-212 (CAS No.: 3182-26-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-213 (CAS No.: 2354-06-5)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 13 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
CFC-214 (CAS No.: 29255-31-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-215 (CAS No.: 4259-43-2)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-216 (CAS No.: 661-97-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
CFC-217 (CAS No.: 422-86-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氟氯氫烷碳化物 (Hydrochlorofluorocarbons) (HCFCs)					
HCFC-21 (CAS No.: 75-43-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-22 (CAS No.: 75-45-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	_
HCFC-31 (CAS No.: 593-70-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-121 (CAS No.: 354-14-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 14 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HCFC-122 (CAS No.: 354-21-2)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-123 (CAS No.: 306-83-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-124 (CAS No.: 2837-89-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-131 (CAS No.: 359-28-4)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-141b (CAS No.: 1717-00-6)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-221 (CAS No.: 422-26-4)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-222 (CAS No.: 422-49-1)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-223 (CAS No.: 422-52-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 15 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HCFC-224 (CAS No.: 422-54-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-225ca (CAS No.: 422-56-0)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-225cb (CAS No.: 507-55-1)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-226 (CAS No.: 431-87-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-231 (CAS No.: 421-94-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-232 (CAS No.: 460-89-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-233 (CAS No.: 7125-84-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-234 (CAS No.: 425-94-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 16 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HCFC-235 (CAS No.: 460-92-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-241 (CAS No.: 666-27-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-242 (CAS No.: 460-63-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-243 (CAS No.: 460-69-5)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-244	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-251 (CAS No.: 421-41-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-252 (CAS No.: 819-00-1)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-253 (CAS No.: 460-35-5)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 17 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HCFC-261 (CAS No.: 420-97-3)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-262 (CAS No.: 421-02-03)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-271 (CAS No.: 430-55-7)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-133a (CAS No.: 75-88-7)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-142b (CAS No.: 75-68-3)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HCFC-132b (CAS No.: 1649-08-7) 海龍 (Halons)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
Halon-1211 (CAS No.: 353-59-3)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
Halon-1301 (CAS No.: 75-63-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 18 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
Halon-2402 (CAS No.: 124-73-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	_
溴甲烷 (Bromomethane) (CAS No.: 74- 83-9)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
不完全鹵化氟溴化物 (Hydrobromofluorocarbons) (HBFCs)					
HBFC-121B4 (C2HFBr4)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-122B3 (C2HF2Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-123B2 (C2HF3Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-124B1 (C2HF4Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-131B3 (C2H2FBr3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-132B2 (C2H2F2Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 19 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-133B1 (C2H2F3Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-141B2 (C2H3FBr2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-142B1 (C2H3F2Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-151B1 (C2H4FBr)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-21B2 (CHFBr2) (CAS No.: 1868- 53-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-221B6 (C3HFBr6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-222B5 (C3HF2Br5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-223B4 (C3HF3Br4)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 20 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-224B3 (C3HF4Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-225B2 (C3HF5Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-226B1 (C3HF6Br)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-22B1 (CHF2Br) (CAS No.: 1511- 62-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-231B5 (C3H2FBr5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	L
HBFC-232B4 (C3H2F2Br4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-233B3 (C3H2F3Br3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-234B2 (C3H2F4Br2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 21 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-235B1 (C3H2F5Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-241B4 (C3H3FBr4)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-242B3 (C3H3F2Br3)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-243B2 (C3H3F3Br2)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-244B1 (C3H3F4Br)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-251B3 (C3H4FBr3)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-252B2 (C3H4F2Br2)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-253B1 (C3H4F3Br)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 22 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HBFC-261B2 (C3H5FBr2)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HBFC-262B1 (C3H5F2Br)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	Ι
HBFC-271B1 (C3H6FBr)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	_
HBFC-31B1 (CH2FBr) (CAS No.: 373-52- 4)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氫氟碳化合物 (Hydrofluorocarbon) (HFCs)					
HFC-125 (C2HF5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-134 (C2H2F4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-134a (CH2FCF3) (CAS No.: 811- 97-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-143 (CH3F3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 23 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
HFC-143a (CH3F3)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-152a (C2H4F2) (CAS No.: 75-37-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-227ea (C3HF7) (CAS No.: 431-89- 0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-23 (CHF3) (CAS No.: 75-46-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-236ea (C3H2F6) (CAS No.: 431-63- 0)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-236fa (CAS No.: 431-63-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-245ca (C3H3F5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
HFC-245fa (C3H3F5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 24 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
				No.1	
HFC-32 (CH2F2) (CAS No.: 75-10-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA	5 5			
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HFC-365mfc (C4H5F5)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HFC-43-10mee (C5H2F10)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
HFC-41 (CH3F) (CAS No.: 593-53-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
全氟化碳 (Perfluorocarbon) (PFCs)					
六氟乙烷 (Fluorocarbon 116) (CAS No.:	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
76-16-4)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
1,4-二氫八氟丁烷 (1,4-	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
dihydrooctafluorobutane) (CAS No.:	質譜儀分析。(With reference to US EPA				
377-36-6)	5021A: 2014, analysis was performed by				
	GC/MS.)				
2-全氟甲基戊烷 (2-	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
Perfluoromethylpentane) (CAS No.:	質譜儀分析。(With reference to US EPA				
355-04-4)	5021A: 2014, analysis was performed by				
	GC/MS.)				
十氟丁烷 (Decafluorobutane) (CAS No.:	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
355-25-9)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 25 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
四氟甲烷 (Freon 14) (CAS No.: 75-73-0)	参考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
八氟丙烷 (Freon 218) (CAS No.: 76-19- 7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
2-全氟甲基丁烷 (Nonafluor-2- (trifluoromethyl)butane) (CAS No.: 594- 91-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟-1-丁烯 (Perfluor-1-butene) (CAS No.: 357-26-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟異丁烯 (Perfluorisobutene) (CAS No.: 382-21-8)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟己烷 (Perfluorohexane) (CAS No.: 355-42-0)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
全氟戊烷 (Perfluoro-n-pentane) (CAS No.: 678-26-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
八氟環丁烷 (Freon C318) (CAS No.: 115- 25-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

日期(Date): 21-Jun-2021

頁數(Page): 26 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

號碼(No.): EKR21601093

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
氯碳氫化物 (Chlorinate hydrocarbon) (CHCs)					
四氯甲烷 (四氯化碳) (Carbon tetrachloride) (CAS No.: 56-23-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1,1-三氯乙烷 (1,1,1-Trichloroethane) (CAS No.: 71-55-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1,1,2-四氯乙烷 (1,1,1,2- Tetrachloroethane) (CAS No.: 630-20- 6)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	_
1,1,2,2-四氯乙烷 (1,1,2,2- Tetrachloroethane) (CAS No.: 79-34-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	_
1,1,2-三氯乙烷 (1,1,2-Trichloroethane) (CAS No.: 79-00-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1-二氯乙烷 (1,1-Dichloroethane) (CAS No.: 75-34-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,1-二氯乙烯 (1,1-Dichloroethylene) (CAS No.: 75-35-4)	參考US EPA 5021A: 2014,以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	_
1,1-二氯丙烯 (1,1-Dichloropropene) (CAS No.: 563-58-6)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 27 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
1,2,3-三氯丙烷 (1,2,3-Trichloropropane) (CAS No.: 96-18-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,2-二氯乙烷 (1,2-Dichloroethane) (CAS No.: 107-06-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
1,2-二氯丙烷 (1,2-Dichloropropane) (CAS No.: 78-87-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	I
1,3-二氯丙烷 (1,3-Dichloropropane) (CAS No.: 142-28-9)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
2,2-二氯丙烷 (2,2-Dichloropropane) (CAS No.: 594-20-7)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氯仿 (Chloroform) (CAS No.: 67-66-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
氯甲烷 (Chloromethane) (CAS No.: 74- 87-3)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
順-1,2-二氯乙烯 (cis-1,2- Dichloroethene) (CAS No.: 156-59-2)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 28 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	限值 (Limit)
		. ,		No.1	
順-1,3-二氯丙烯 (cis-1,3-	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
Dichloropropene) (CAS No.: 10061-01-	質譜儀分析。(With reference to US EPA				
5)	5021A: 2014, analysis was performed by				
	GC/MS.)				
二氯甲烷 (Dichloromethane) (CAS No.:	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
75-09-2)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
四氯乙烯 (Tetrachloroethene) (CAS No.:	參考US EPA 5021A: 2014,以氣相層析儀/	mg/kg	1	n.d.	-
127-18-4)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
反-1,2-二氯乙烯 (trans-1,2-	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
Dichloroethene) (CAS No.: 156-60-5)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
反-1,3-二氯丙烯 (trans-1,3-	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
Dichloropropene) (CAS No.: 10061-02-	質譜儀分析。(With reference to US EPA				
6)	5021A: 2014, analysis was performed by				
	GC/MS.)				
三氯乙烯 (Trichloroethylene) (CAS No.:	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
79-01-6)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
. , .	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
3)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				
六氯-1,3-丁二烯 (Hexachlorobutadiene)	參考US EPA 5021A: 2014 · 以氣相層析儀/	mg/kg	1	n.d.	-
(CAS No.: 87-68-3)	質譜儀分析。(With reference to US EPA				
	5021A: 2014, analysis was performed by				
	GC/MS.)				

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



# **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 29 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1	限值 (Limit)
溴氯甲烷 (Bromochloromethane) (CAS No.: 74-97-5)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-
六氟化硫 (Sulfur hexafluoride) (CAS No.: 2551-62-4)	參考US EPA 5021A: 2014 · 以氣相層析儀/ 質譜儀分析。(With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.)	mg/kg	1	n.d.	-

#### 備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. MDL = Method Detection Limit (方法偵測極限值)
- 3. n.d. = Not Detected (未檢出); 小於MDL / Less than MDL
- 4. "-" = Not Regulated (無規格值)
- 5. \*\*= Qualitative analysis (No Unit) 定性分析(無單位)
- 6. Negative = Undetectable 陰性(未偵測到); Positive = Detectable 陽性(已偵測到)
- 7. 石綿定性分析試驗範圍: <0.1%~100% · 石綿鑑定的判定基準是以檢出含有石綿纖維為『Positive』 · 未檢出石綿纖維為『Negative』 。(Testing range of asbestos qualitative analysis is from less than 0.1% to 100%. The judgment criterion: asbestos fibers being found is shown as "Positive"; asbestos fibers not being found is shown as "Negative".)
- 8. 全氟辛烷磺酸及其鹽類包含 (PFOS and its salts including): CAS No.: 29081-56-9, 2795-39-3, 29457-72-5, 70225-14-8, 56773-42-3, 251099-16-8, 307-35-7.
- 9. 全氟辛酸及其鹽類包含 (PFOA and its salts including):

CAS No.: 3825-26-1, 335-95-5, 2395-00-8, 335-93-3, 335-66-0.

10. (#2) =

a. 當六價鉻結果大於0.13 µg/cm<sup>2</sup> · 表示樣品表層含有六價鉻。(The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 µg/cm<sup>2</sup>. The sample coating is considered to contain Cr(VI).) b. 當六價鉻結果為n.d. (濃度小於0.10 µg/cm<sup>2</sup>) · 表示表層不含六價鉻。(The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than 0.10 µg/cm<sup>2</sup>). The coating is considered a non-Cr(VI) based coating) c. 當六價鉻結果介於 0.10 及 0.13 µg/cm<sup>2</sup> 時,無法確定塗層是否含有六價鉻。(The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> is considered to be inconclusive - unavoidable coating variations may influence the determination.)

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



### **Test Report**

號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 30 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD) 高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

11. ▲: MDL是針對元素/測試化合物之評估。(The MDL was evaluated for element / tested substance.) 換算公式 (Conversion Formula): AX = A × F

AX	А	F
氧化鈹 (Beryllium oxide) (BeO)	鈹 (Beryllium)	2.7753
氧化雙三丁基錫 (Bis(tributyltin)oxide) (TBTO)	三丁基錫 (Tributyl Tin) (TBT)	1.024
五氧化二銻 (Antimony Pentaoxide) (Sb2O₅)	銻 (Antimony)	1.3285
三氧化二銻 (Antimony trioxide) (Sb2O3)	銻 (Antimony)	1.1971

參數換算表 (Parameter Conversion Table):

https://eecloud.sgs.com/Region\_TW/DocDownload.aspx#otherDoc

12. 符合性結果之判定係以測試結果與限值做比較。(The statement of compliance conformity is based on comparison of testing results and limits.)

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 31 of 47

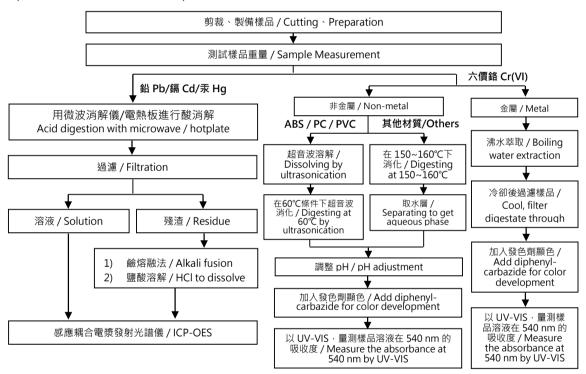
台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

#### 重金屬流程圖 / Analytical flow chart of Heavy Metal

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. ( $Cr^{6+}$  test method excluded)



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



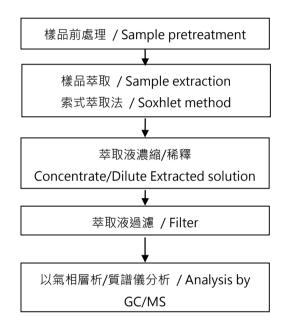
號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 32 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

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



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



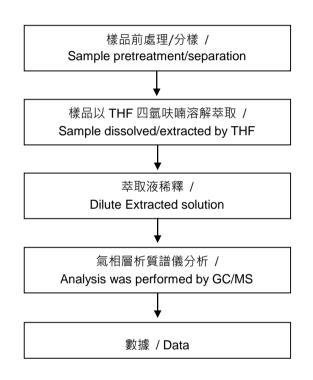
號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 33 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

#### 可塑劑分析流程圖 / Analytical flow chart of phthalate content



【測試方法/Test method: IEC 62321-8】

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



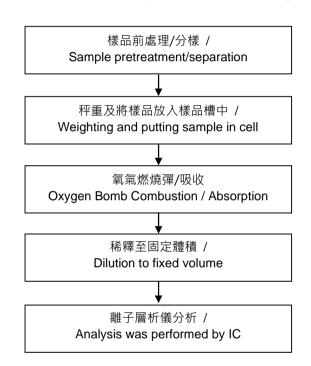
日期(Date): 21-Jun-2021

頁數(Page): 34 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

號碼(No.): EKR21601093



鹵素分析流程圖 / Analytical flow chart of Halogen

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> 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 instruction, 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.



號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

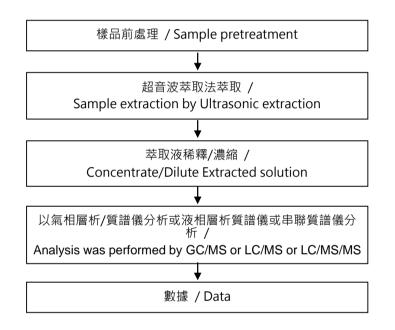
頁數(Page): 35 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

#### 全氟化合物(包含全氟辛酸/全氟辛烷磺酸/其相關化合物等等)分析流程圖 / Analytical flow

#### chart – PFAS (including PFOA/PFOS/its related compound, etc.)



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 36 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

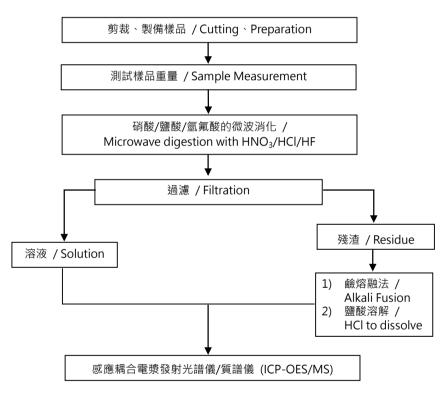
高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

#### 重金屬流程圖 / Analytical flow chart of Heavy Metal

根據以下的流程圖之條件,樣品已完全溶解。

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【參考方法/Reference method: US EPA 3051、US EPA 3052】



\* US EPA 3051 方法未添加氫氟酸 / US EPA 3051 method does not add HF.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. 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 instruction, 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.



號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 37 of 47

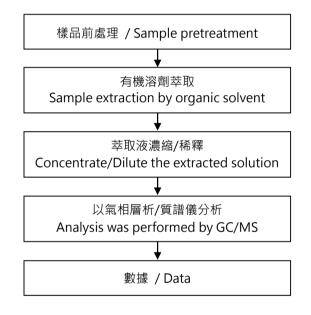
台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

分析流程圖 / Analytical flow chart

【適用於:多氯聯苯、多氯奈、多氯三聯苯、滅蟻靈、氯化石蠟、DBBT】

\*Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



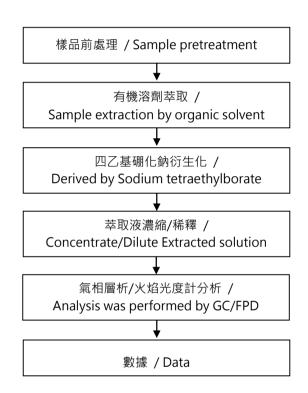
日期(Date): 21-Jun-2021

頁數(Page): 38 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

號碼(No.): EKR21601093



有機錫分析流程圖 / Analytical flow chart - Organic-Tin

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



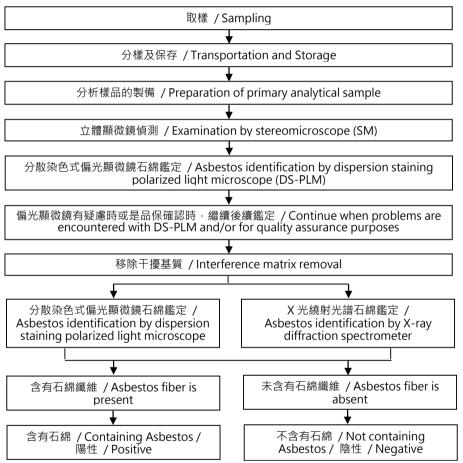
號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 39 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

#### 石綿鑑定分析流程圖 / Analysis flow chart for determination of Asbestos



【參考方法(Reference method): EPA 600/R-93/116】

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and. for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. 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 instruction, 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.



日期(Date): 21-Jun-2021

頁數(Page): 40 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

號碼(No.): EKR21601093

様品前處理 / Sample pretreatment 超音波萃取法萃取 / Sample extraction by Ultrasonic extraction 萃取液稀釋/濃縮 / Concentrate/Dilute Extracted solution 以液相層析質譜儀分析萃取液 / Analysis was performed by LC/MS

四溴雙酚-A分析流程圖 / TBBP-A analytical flow chart

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> 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 instruction, 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.

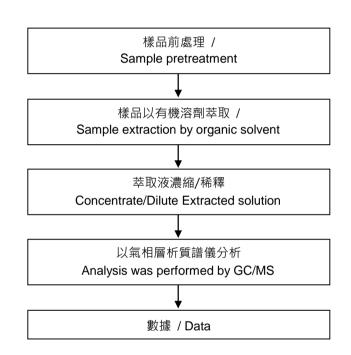


號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 41 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))



#### 富馬酸二甲酯分析流程圖 / Analytical flow chart of Dimethyl Fumarate content

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.

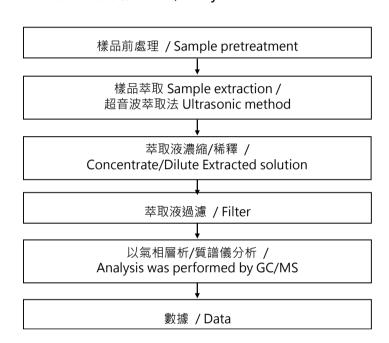


號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 42 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))



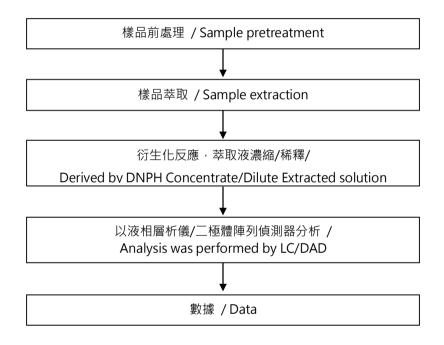
六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> 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 instruction, 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.



**ここしてという** 読碼(No.): EKR21601093 日期(Date): 21-Jun-2021 頁數(Page): 43 of 47 台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD) 高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

#### 甲醛分析流程圖 / Analytical flow chart - Formaldehyde



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.



日期(Date): 21-Jun-2021

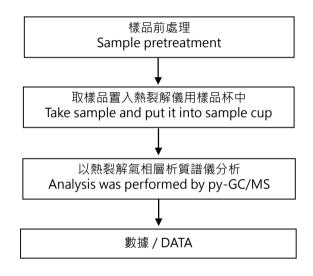
頁數(Page): 44 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

號碼(No.): EKR21601093

#### 紅磷分析流程 / Analytical flow chart - Red phosphorus



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> 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 instruction, 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.



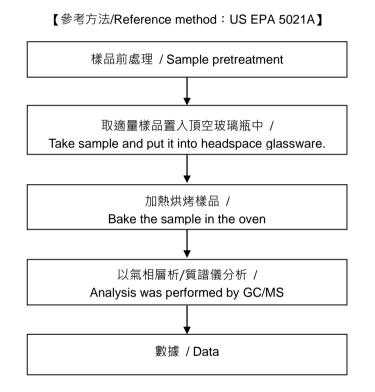
號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 45 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

#### 揮發性有機化合物分析流程圖 / Analytical flow chart of volatile organic compounds (VOCs)



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.

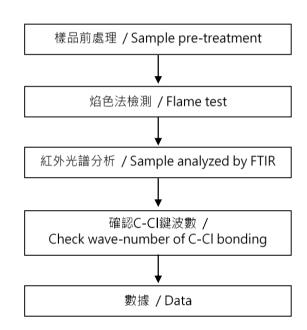


號碼(No.): EKR21601093 日期(Date): 21-Jun-2021

頁數(Page): 46 of 47

台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)

高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))



聚氯乙烯物質判定分析流程圖 / Analysis flow chart - PVC

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> 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 instruction, 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.

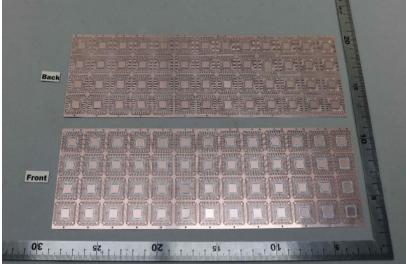


 こことにという
 読碼(No.): EKR21601093
 日期(Date): 21-Jun-2021
 頁數(Page): 47 of 47

 台灣興勝半導體材料股份有限公司 (SH ELECTRONICS TAIWAN CO., LTD)
 高雄市楠梓區東七街16號 (NO. 16, EAST 7TH STREET, NANZIH DISTRICT, KAOHSIUNG CITY, TAIWAN (R.O.C.))

\* 照片中如有箭頭標示,則表示為實際檢測之樣品/部位. \* (The tested sample / part is marked by an arrow if it's shown on the photo.)

# EKR21601093



\*\* 報告結尾 (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 <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. 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 instruction, 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.