

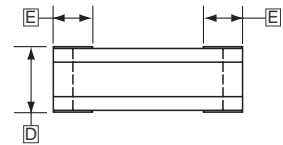
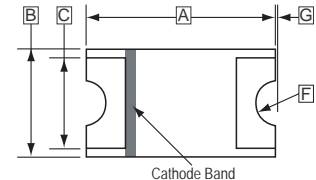
RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

**0603**



## FEATURES

- Lead less chip form, no lead damage
- Lead-free solder joint, no wire bond & lead frame
- Low power loss, High efficiency
- High current capability, low VF
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0



## APPLICATION

- Switching mode power supply applications
- Portable equipment battery applications
- General rectification
- DC / DC converter
- Telecommunication

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.50	1.70	E	0.30	0.40
B	0.80	1.00	F	R 0.20	
C	0.70 TYP.		G	0.05 REF.	
D	0.50	0.80			

## MECHANICAL DATA

- Case: Packed with FRP substrate and epoxy underfilled
- Terminals: Pure tin-plated (lead-free), solderable per MIL-STD-750, method 2026.
- Polarity: Laser cathode band marking
- Weight : 0.003 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25 °C)

TYPE NUMBER	SYMBOL	UMMD032	UMMD034	UNITS
Peak Repetitive Peak reverse voltage	V <sub>RRM</sub>	20	40	V
Maximum Average Forward Current (See Fig. 1)	I <sub>F(AV)</sub>	0.3		A
Peak Forward Current @ 8.3 ms half sine-wave	I <sub>FSM</sub>	2.0		A
Maximum Forward Voltage (Note 1) I <sub>F</sub> = 0.3 A	V <sub>F</sub>	0.50		V
Typical Forward Voltage (Note 1) I <sub>F</sub> = 0.1 A		0.38		V
I <sub>F</sub> = 0.2 A		0.43		
I <sub>F</sub> = 0.3 A		0.47		
Maximum Repetitive Peak Reverse Current (Note 1) At V <sub>R</sub> = 10V, T <sub>A</sub> = 25 °C	I <sub>RRM</sub>	20		uA
Typical Repetitive Peak Reverse Current (Note 1) At V <sub>R</sub> = Max. V <sub>RRM</sub> , T <sub>A</sub> = 25 °C		50		
Typical Thermal Resistance – Junction to Ambient (Note 2)	R <sub>θJA</sub>	160		°C / W
Typical Thermal Resistance – Junction to Lead (Note 2)	R <sub>θJL</sub>	110		
Junction Capacitance	C <sub>J</sub>	35		pF
Operating Temperature Range	T <sub>J</sub>	-55 ~ + 125		°C
Storage temperature	T <sub>STG</sub>	-65 ~ + 150		°C

NOTES:

1. Pulse test width P<sub>w</sub> = 300 μsec, 1% duty cycle.
2. Mounted on P.C. board with 0.2 x 0.2" (5.0 x 5.0 mm) copper pad areas.

**RATINGS AND CHARACTERISTIC CURVES**

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

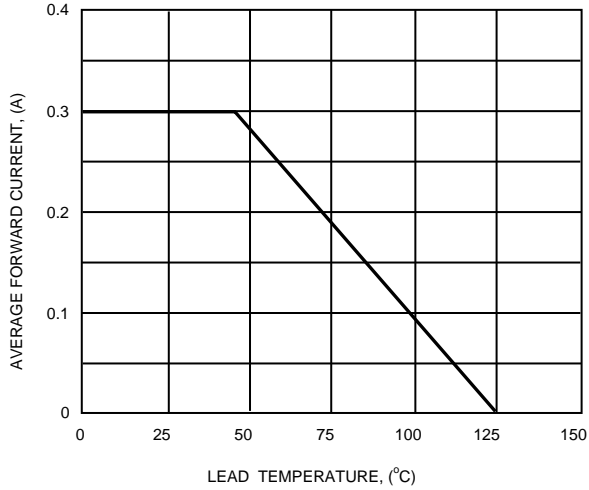


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

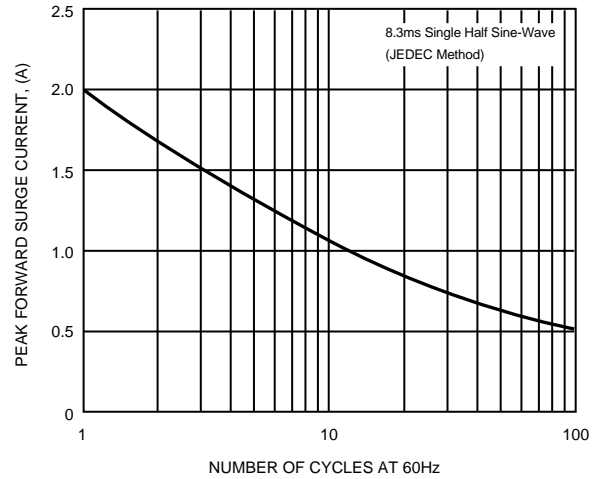


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

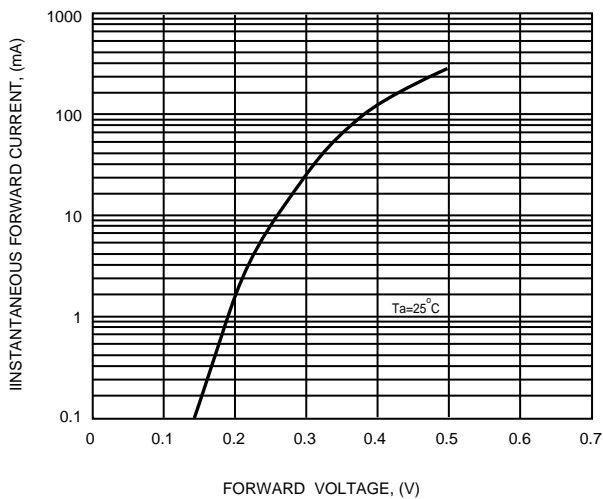


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

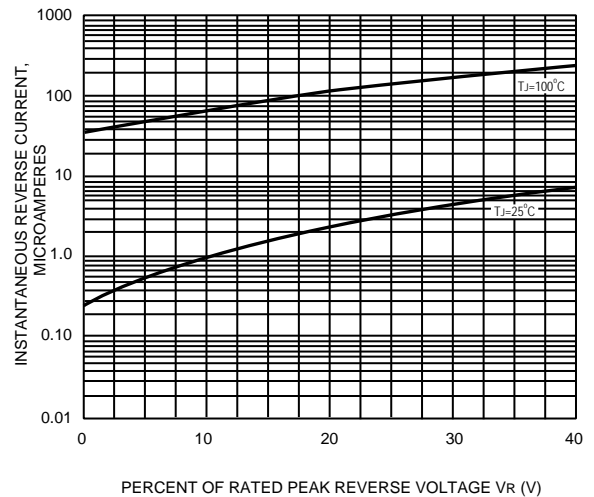
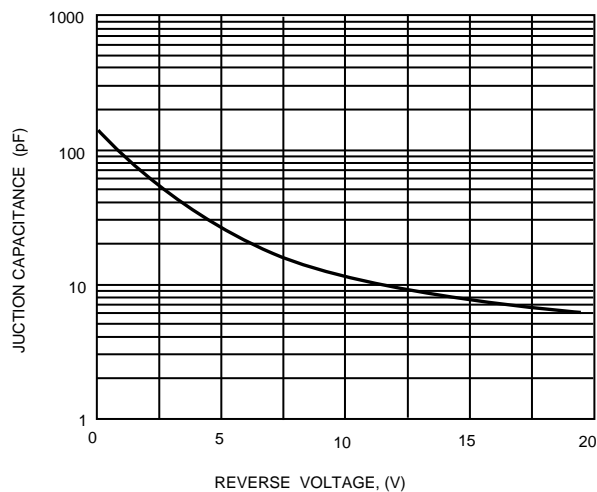


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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SECOS SEMICONDUCTOR CORP.

台北縣深坑鄉北深路三段155巷33號8樓

8F, NO. 33, LANE 155, SEC. 3, BEI-SHEN RD., SHEN KENG HSIANG, TAIPEI, TAIWAN.



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

樣品名稱(Sample Description) : SUPER CHIP DIODE  
樣品型號(Style/Item No.) : CSCD, CTCD, BSCD, SCD, SSCD, MSCD, USCD, VSCD, CTCD, MBC, MBCR, MBCM, 0402, 0603, 0805, 1206, 2010, 2114, 3220 SERIES  
收件日期(Sample Receiving Date) : 2009/09/15  
測試期間(Testing Period) : 2009/09/15 TO 2009/09/22

=====  
測試需求(Test Requested) : 參照 RoHS 2002/95/EC 及其修定指令要求. (In accordance with the RoHS Directive 2002/95/EC, and its amendment directives).  
測試方法(Test Method) : 參考 IEC 62321: 2008 方法檢測. (With reference to IEC 62321: 2008. Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products).  
(1) 以感應耦合電漿原子發射光譜儀檢測鎘含量. / Determination of Cadmium by ICP-AES.  
(2) 以感應耦合電漿原子發射光譜儀檢測鉛含量. / Determination of Lead by ICP-AES.  
(3) 以感應耦合電漿原子發射光譜儀檢測汞含量. / Determination of Mercury by ICP-AES.  
(4) 以 UV-VIS 檢測六價鉻含量. / Determination of Hexavalent Chromium by UV/Vis Spectrometry.  
(5) 以氣相層析儀/質譜儀檢測多溴聯苯和多溴聯苯醚含量. / Determination of PBB and PBDE by GC/MS.  
測試結果(Test Results) : 請見下一頁 (Please refer to next pages).

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

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# 測試報告

## Test Report

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8F, NO. 33, LANE 155, SEC. 3, BEI-SHEN RD., SHEN KENG HSIANG, TAIPEI, TAIWAN.



測試結果(Test Results) 單位(Unit): mg/kg

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

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### 測試部位描述 (TEST PART DESCRIPTION):

NO.1 : 整體混測 (13款) (MIXED ALL PARTS (THIRTEEN TYPES))

### 備註(Note):

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected (未檢出)
3. MDL = Method Detection Limit (方法偵測極限值)
4. "-" = Not Regulated (無規格值)
5. 樣品的測試是基於申請人要求混合測試，報告中的混合測試結果不代表其中個別單一材質的含量。  
(The samples was/were analyzed on behalf of the applicant as mixing sample in one testing.  
The above results was/were only given as the informality value.)

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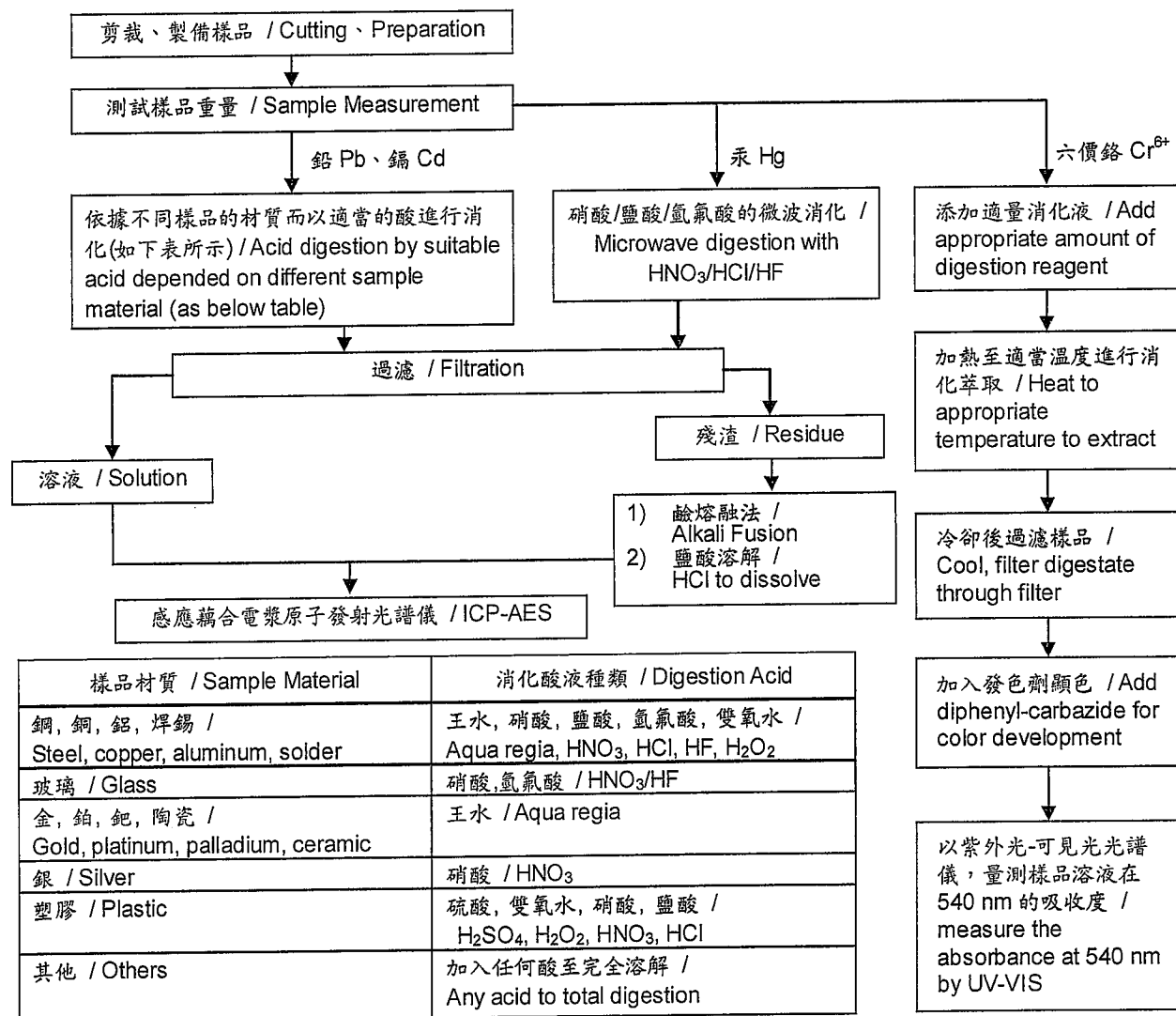
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- 1) 根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) 測試人員：楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人：張啓興 / Name of the person in charge of measurement: Troy Chang



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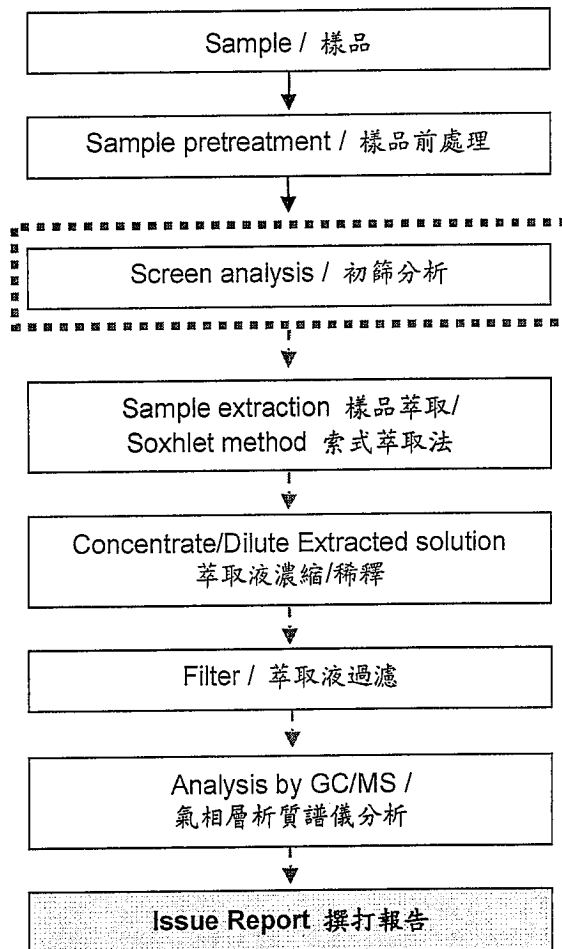
### 多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

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

初次測試程序 / First testing process ———▶

選擇性篩檢程序 / Optional screen process .....

確認程序 / Confirmation process - - - ▶



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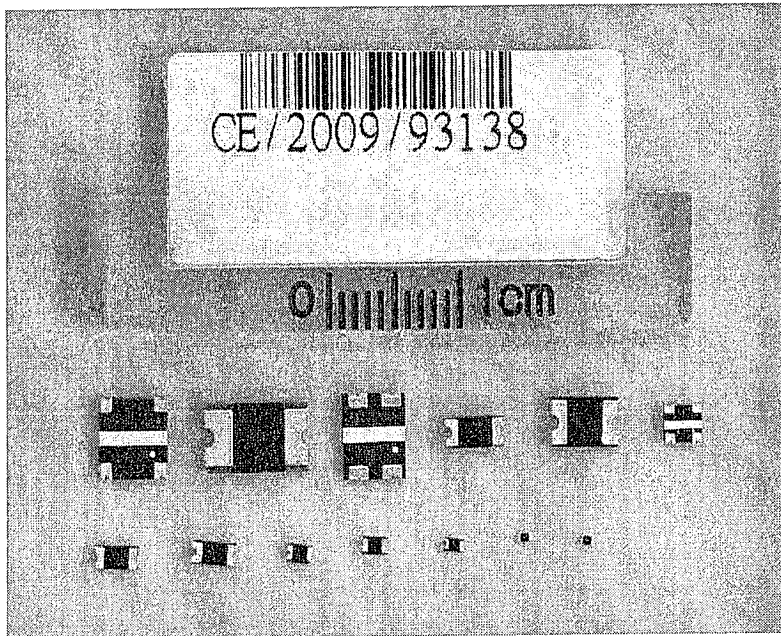
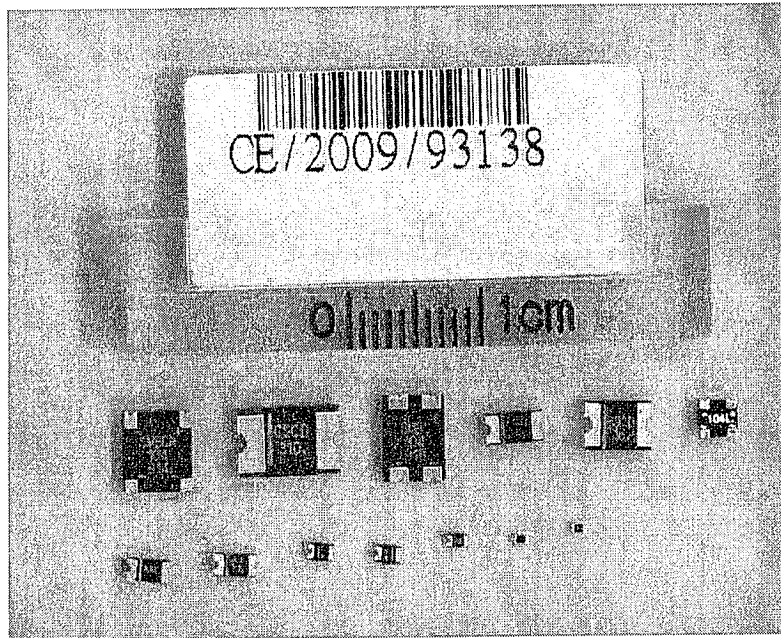
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