



# Specification for Approval

		Date: 2022	/12/20			
	Custom	ner				
	TAI-TECH P/N:	WCM9070FA	SV-701-LM-H	<u>)                                    </u>		
	CUSTOMER P/N:					
	DESCRIPTION:					
	QUANTITY:		pcs			
	REMARK:					
_	Cus	stomer Approval	Feedback		1	
■ 西北臺慶科技股份有限公 TAI-TECH Advanced Ele Headquarter: NO.1 YOU 4TH ROAD, YOUTH TAO-YUAN HSIEN, TAIWAN, F TEL: +886-3-4641148 FAX: http://www.tai-tech.com.tw E-mail: sales@tai-tech.com.tw	ectronics Co., Ltd I INDUSTRIAL DISTRICT, YANG-ME R.O.C. +886-3-4643565	EI,				
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JIANG-SU, CHINA TEL: +86-512-57619396 FA E-mail: sales@tai-tech.cn			R&D Center	•		
□ 慶邦電子元器件(泗洪)有 TAIPAQ ELECTRONICS (	SIHONG) CO., LTD		APPROVED	CHECK	ED.	DRAWN
Sihong development zone Su TEL: +86-527-88601191 FAX E-mail: sales@taipaq.cn			楊祥忠	張家貴		何玉蓮
			Mike Yang	Chia-Kai (	Chang	Anna Ho

# Wire Wound Power Common Mode Filter WCM9070FASV-701-LM-HD

	ECN HISTORY LIST								
REV	DATE	DESCRIPTION	APPROVED	CHECKED	DRAWN				
1.0	22/12/26	新 發 行	楊祥忠	張家凱	何玉蓮				
/ <del>-++-</del>			1	1					
備									
註									

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# Wire Wound Power Common Mode Filter WCM9070FASV-701-LM-HD

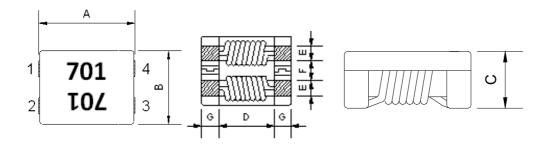
### 1. Features

- 1. High reliability -Reliability tests comply with AEC-Q200





### 2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F(mm)	G(mm)
WCM9070	9.0±0.5	7.0±0.2	4.5 max.	5.3 typ.	1.5±0.5	2.1±0.5	1.8±0.5

Unit:mm

### 3. Part Numbering

WCM	9070	F	A	S	V	-	<b>701</b>	-	LM	-	HD
Α	В	С	D	Е	F		G		Н		ı

A: Series B: Dimension

C: Material Ferrite Core
D: Process Asembled

E: Type S=Shielded , N=Unshielded

F: Category Code V=Vehicle G: Impedance  $701=700 \Omega$ 

H: Laser Marking
I: Control S/N

### 4. Specification

TAI-TECH	Impedance $(\Omega)$		Test Frequency	DC Resistance (mΩ) max.	Rated Current	Rated Volt.	Insulation Resistance	
Part Number	min.	typ.	(MHz)	(11 line)	(A) max.	(Vdc) max.	$(M\Omega)$ min.	
WCM9070FASV-701-LM-HD	500	700	100	9	6.0	80	10	

Note:

Measurement board data

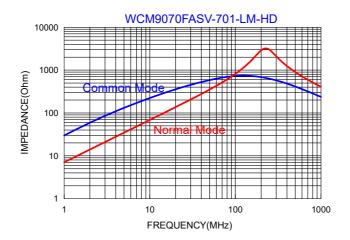
Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

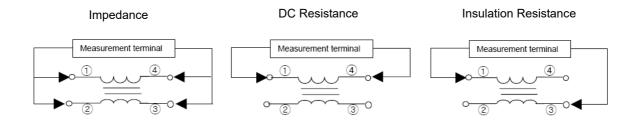
Pattern dimensions: 45 X 30 mm (Double side board)

Pattern thickness : 50  $\,\mu\,\mathrm{m}$ 

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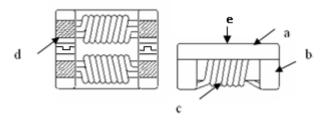


### 5. Schematic Diagram



### 6. Materials

No.	Description	Specification
a.	Upper Plate	Plastic
b.	Core	Ferrite Core
С	Wire	Enameled Copper
d	Termination	Ag/Ni/Sn + Sn Solder
е	Mark	Laser Marking



### 7. Reliability and Test Condition

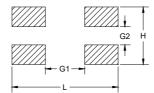
Item	Performance	Test Condition							
Operating temperature	-40~+125℃ (Including self - temperature rise)								
Storage temperature	-40~+125℃ (on board)								
Electrical Performance Test									
Z(common mode)		Agilent E4991A + Keysight 16092A							
DCR	Refer to standard electrical characteristics list.	Agilent-34420A							
I.R.		Chroma 19073							
Temperature Rise Test	Rated Current ≧ 1A ∆T 40°C Max	1.Applied the allowed DC current.     2.Temperature measured by digital surface thermometer							
Reliability Test		, ,							
High Temperature Exposure(Storage) AEC-Q200		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles Temperature : 125±2°C Duration : 1000hrs Min.							
Temperature Cycling AEC-Q200		Measured at room temperature after placing for 24±4 hrs.  Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles Condition for 1 cycle  Step1: -40±2°C 30min Min.  Step2: 125±2°C transition time 1min MAX.  Step3: 125±2°C 30min Min.  Step4: Low temp. Transition time 1min MAX.  Number of cycles: 1000  Measured at room temperature after placing for 24±4 hrs.							
Moisture Resistance (AEC-Q200)	Appearance: No damage. Impedance: within±15% of initial value RDC: within ±15% of initial value and shall not exceed the specification value	t=24 hours/cycle. Note: Steps 7a & 7b not required. Unpowered. Measurement at 24±2 hours after test conclusion.    The state of the sta							
Biased Humidity (AEC-Q200)		Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles Humidity: 85±3% R.H,  Temperature: 85°C±2°C  Duration: 1000hrs Min.							
High Temperature Operational Life (AEC-Q200)		Measured at room temperature after placing for24±4hrs Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles Temperature: 125±2°C Duration: 1000hrs Min. with 100% rated current. Measured at room temperature after placing for24±4hrs							
External Visual	Appearance: No damage.  Inspect device construction, marking and workmarkers not required.								
Physical Dimension	According to the product specification size measurement	According to the product specification size measurement							
Resistance to Solvents	Appearance : No damage.	Add aqueous wash chemical - OKEM clean or equivalent.							
Mechanical Shock	Appearance: No damage. Impedance: within±15% of initial value RDC: within ±15% of initial value and shall not exceed the specification value	Type         Peak value (g's)         Normal duration (D) (ms)         Wave form form         Velocity change (Vi)ft/sec           SMD         100         6         Half-sine         12.3           Lead         100         6         Half-sine         12.3							
		3 shocks in each direction along 3 perpendicular axes. (18 shocks).							

Item	Performance	Test Condition			
Vibration		IPC/JEDEC J-STD-020E Classification Reflow Profiles Oscillation Frequency:10Hz~2KHz~10Hz for 20 minute Equipment: Vibration checker Total Amplitude:5g Testing Time: 12 hours(20 minutes, 12 cycles each of 3 orientations)			
Resistance to Soldering Heat	Appearance: No damage. Impedance: within±15% of initial value RDC: within ±15% of initial value and shall not exceed the	Test condition :    Temperature(°C)   Time(s)   Temperature ramp/immersion and emersion rate   Temperature of heat cycles			
Thermal shock (AEC-Q200)	specification value	Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles Condition for 1 cycle Step1: -40±2℃ 15±1min Step2: 125±2℃ within 20Sec. Step3: 125±2℃ 15±1min Number of cycles: 300 Measured at room temperature after placing fo24±4hrs			
ESD	Appearance : No damage.	Direct Contact and Air Discharge PASSIVE COMPONENT HBM ESD Discharge Waveform to a Coaxial Target Test method: AEC-0200-002 Test mode: Contact Discharge Discharge level: 4 KV (Level: 2)			
Solderability	More than 95% of the terminal electrode should be covered with solder ∘	a. Method B, 4 hrs @155°C dry heat @235°C±5°C Testing Time :5 +0/-0.5 seconds b. Method D category 3. (8hours ± 15 min)@ 260°C±5°C Testing Time :30 +0/-0.5 seconds			
Electrical Characterization	Refer Specification for Approval	Summary to show Min, Max, Mean and Standard deviation.			
Flammability	Electrical Test not required.	V-0 or V-1 are acceptable.			
Board Flex	Preconditioning: Run through reflow for 3 J-STD-020E Classification Reflow Profiles Place the 100mm X 40mm board into a fixture sim in below Figure with the component facing down, consist of mechanical means to apply a force whic (D) x = 2 mm minimum. The duration of the applies 5) sec. The force is to be applied only once to the t Support  Solder Chip Printed crouit bo  Appearance: No damage				
Terminal Strength(SMD)	Appearance : No damage	Preconditioning: Run through reflow for 3 times.( IPC/JEDEC J-STD-020E Classification Reflow Profiles With the component mounted on a PCB with the device to be tested, apply a 17.7 N (1.8 Kg) force to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested.  Tradius 0,5 mm  DUT  Wide  thickness  shear force			

### 8. Soldering and Mounting

#### 8-1. Recommended PC Board Pattern

	WCM9070
L(mm)	11.0
H(mm)	5.0
G1(mm	6.0
G2(mm	2.0



#### 8-2. Soldering

Mildly activated rosin fluxes are preferred. TAI-TECH terminations are suitable for re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

#### 8-2.1 Soldering Reflow:

Recommended temperature profiles for lead free re-flow soldering in Figure 1. Table 1.1&1.2 (J-STD-020E)

#### 8-2.2 Soldering Iron:

Products attachment with a soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended. (Figure 2.)

- Preheat circuit and products to 150°C
  350°C tip temperature (max)
- Never contact the ceramic with the iron tip1.0mm tip diameter (max)
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- Limit soldering time to 4~5sec.

Fig.1 Soldering Reflow

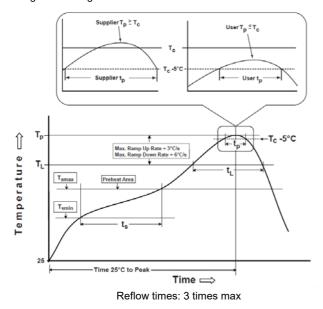
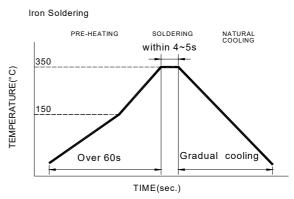


Fig.2 Iron soldering temperature profiles



Iron Soldering times: 1 times max

Table (1.1): Reflow Profiles

Profile Type:	Pb-Free Assembly
$\label{eq:tau} \begin{split} & \text{Preheat} \\ & \text{-Temperature Min}(T_{smin}) \\ & \text{-Temperature Max}(T_{smax}) \\ & \text{-Time}(t_s) \text{from}(T_{smin} \text{ to } T_{smax}) \end{split}$	150°C 200°C 60-120seconds
Ramp-up rate( $T_L$ to $T_p$ )	3°ℂ/second max.
$\label{eq:Liquidus} \begin{array}{c} \text{Liquidus temperature}(T_L) \\ \text{Time}(t_L) \\ \text{maintained above } T_L \end{array}$	217°C 60-150 seconds
Classification temperature(T <sub>c</sub> )	See Table (1.2)
$\label{eq:total_final} \mbox{Time}(t_p) \mbox{ at Tc-}  5^\circ \!\!\!  \mbox{(Tp should be equal to or less than Tc.)}$	< 30 seconds
Ramp-down rate(T <sub>p</sub> to T <sub>L</sub> )	6°C /second max.
Time 25℃ to peak temperature	8 minutes max.

**Tp**: maximum peak package body temperature, **Tc**: the classification temperature.

For user (customer) **Tp** should be equal to or less than **Tc**.

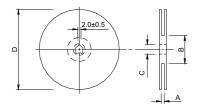
Table (1.2) Package Thickness/Volume and Classification Temperature (T<sub>c</sub>)

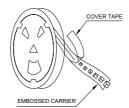
	Package	Volume mm <sup>3</sup>	Volume mm <sup>3</sup>	Volume mm <sup>3</sup>
	Thickness	<350	350-2000	>2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

Reflow is referred to standard IPC/JEDEC J-STD-020E ∘

### 9. Packaging Information

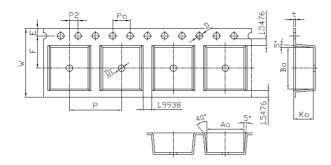
#### 9-1. Reel Dimension





Туре	A(mm)	B(mm)	C(mm)	D(mm)	
13"x16mm	16.0±0.5	100.0±2.0	13.5±0.5	330	

#### 9-2. Tape Dimension

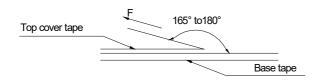


Series	W(mm)	P(mm)	E(mm)	F(mm)	P0(mm)	P2(mm)	Bo(mm)	Ao(mm)	Ko(mm)	D(mm)	D1(mm)	t(mm)
WCM9070	16.00±0.30	12.00±0.10	1.75±0.10	7.50±0.10	4.00±0.10	2.00±0.10	9.60±0.10	8.60±0.10	4.60±0.10	1.50+0.10-0.00	1.50±0.10	0.40±0.05

#### 9-3. Packaging Quantity

Size	Chip/Reel	Inner Box	Carton
WCM9070	800	1600	12800

#### 9-4. Tearing Off Force



The force for tearing off cover tape is 15 to 80 grams in the arrow direction under the following conditions.

Room Temp.	Room Humidity	Room atm	Tearing Speed		
(℃)	(%)	(hPa)	mm/min		
5~35	45~85	860~1060	300		

#### **Application Notice**

• Storage Conditions(component level)

To maintain the solderability of terminal electrodes:

- 1. TAI-TECH products meet IPC/JEDEC J-STD-020E standard-MSL, level 1.
- 3. Recommended products should be used within 12 months form the time of delivery.
- 4. The packaging material should be kept where no chlorine or sulfur exists in the air.
- Transportation
  - 1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
  - 2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
  - ${\it 3. } \ {\it Bulk handling should ensure that abrasion and mechanical shock are minimized.}$

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**Test Report** 

號碼(No.): ETR22303152

日期(Date): 18-Mar-2022

頁數(Page): 1 of 15

西北臺慶科技股份有限公司 (TAI-TECH ADVANCED ELECTRONICS CO., LTD.)

臺慶精密電子 (昆山) 有限公司 (TAI-TECH ADVANCED ELECTRONICS (KUN-SHAN) CO., LTD.)

慶邦電子元器件 (泗洪) 有限公司 (TAIPAQ ELECTRONICS (SI-HONG) CO., LTD.)

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中國,江蘇省,宿遷市,泗洪縣,經濟開發區杭州路南側,建設北路東側 (THE SOUTH HANGZHOU ROAD AND THE EAST JIANSHE ROAD,ECONOMIC DEVELOPMENT ZONE,SIHONG COUNTY,SUQIANCITY,JIANGSU PROVINCE,P,R,CHINA)

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 the applicant as):

樣品名稱(Sample Name)

WIREWOUND SERIES

樣品型號(Style/Item No.)

WCM(YCW) · WCL · HSF · HDMI · DVI · BCM · PCM · TCM · LCM · LPF ·

TXF · ACM · DCM(YLW) · WIH · BPH · TNH · YCM · STF · APO · OLL ·

FGO · APOC SERIES

收件日(Sample Receiving Date)

: 11-Mar-2022

測試期間(Testing Period)

: 11-Mar-2022 to 18-Mar-2022

測試需求(Test Requested) :

依據客戶要求進行測試,測試項目請參閱測試結果表格。(Testing item(s) is/are specified by client. Please refer to result table for testing item(s).)

測試結果(Test Results)

請參閱下一頁 (Please refer to following pages.)

Troy Chang / Department Mayager Signed for and on behalf of the SGS TAIWAN LTD.
Chemical Laboratory - Taipei



PIN CODE: 29D6F7D2

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#### 測試部位敘述 (Test Part Description)

No.1

整體混測 (MIXED ALL PARTS)

#### 測試結果 (Test Results)

測試項目	測試方法	單位	MDL	結果
(Test Items)	(Method)	(Unit)		(Result)
				No.1
鎘 (Cd) (Cadmium (Cd)) (CAS No.: 7440-	參考IEC 62321-5: 2013 · 以感應耦合電漿發射光	mg/kg	2	n.d.
43-9)	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)	参考IEC 62321-5: 2013,以感應耦合電漿發射光	mg/kg	2	n.d.
	譜儀分析。(With reference to IEC 62321-5:			
	2013, analysis was performed by ICP-OES.)			
汞 (Hg) (Mercury (Hg)) (CAS No.: 7439-	参考IEC 62321-4: 2013+ AMD1: 2017·以感應耦	mg/kg	2	n.d.
97-6)	合電漿發射光譜儀分析。(With reference to IEC			
	62321-4: 2013+ AMD1: 2017, analysis was			
	performed by ICP-OES.)			
六價鉻 Cr(VI) (Hexavalent Chromium	參考IEC 62321-7-2: 2017·以紫外光-可見光分光	mg/kg	8	n,d,
Cr(VI)) (CAS No.: 18540-29-9)	光度計分析。(With reference to IEC 62321-7-2:			
	2017, analysis was performed by UV-VIS.)			

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中國·江蘇省·宿遷市·泗洪縣·經濟開發區杭州路南側,建設北路東側 (THE SOUTH HANGZHOU ROAD AND THE EAST JIANSHE ROAD · ECONOMIC DEVELOPMENT ZONE · SIHONG COUNTY · SUQIANCITY · JIANGSU PROVINCE · P,R · CHINA)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
NG 1744-8-8-78-4			-	No.1
一溴聯苯 (Monobromobiphenyl)	<del></del>	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 (Tetrabromobiphenyl)		mg/kg	5	n.d.
五溴聯苯 (Pentabromobiphenyl)		mg/kg	5	n.d.
六溴聯苯 (Hexabromobiphenyl)		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)	<del>-</del>	mg/kg	5	n.d.
十溴聯苯 (Decabromobiphenyl)	<u> </u>	mg/kg	5	n.d.
多溴聯苯總和 (Sum of PBBs)	參考IEC 62321-6: 2015 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015,	mg/kg	-	n.d.
一溴聯苯醚 (Monobromodiphenyl ether)		mg/kg	5	n.d.
二溴聯苯醚 (Dibromodiphenyl ether)	analysis was performed by GC/MS.)	mg/kg	5	n.d.
三溴聯苯醚 (Tribromodiphenyl ether)		mg/kg	5	n.d.
四溴聯苯醚 (Tetrabromodiphenyl ether)		mg/kg	5	n.d.
五溴聯苯醚 (Pentabromodiphenyl ether)		mg/kg	5	n.d.
六溴聯苯醚 (Hexabromodiphenyl ether)		mg/kg	5	n.d.
七溴聯苯醚 (Heptabromodiphenyl ether)		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)	1	mg/kg	5	n.d.
多溴聯苯醚總和 (Sum of PBDEs)	1	mg/kg		n.d.

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# **Test Report**

號碼(No.): ETR22303152

日期(Date): 18-Mar-2022

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西北臺慶科技股份有限公司 (TAI-TECH ADVANCED ELECTRONICS CO., LTD.)

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1
郷苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl		mg/kg	50	n.d.
phthalate (BBP)) (CAS No.: 85-68-7)	•		го.	
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP)) (CAS No.: 84-74-2)		mg/kg	50	n.d.
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di- (2-ethylhexyl) phthalate (DEHP)) (CAS No.: 117-81-7)		mg/kg	50	n.d.
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP)) (CAS No.: 84-69-5)	参考IEC 62321-8: 2017・以氣相層析儀/質譜儀分析・(With reference to IEC 62321-8: 2017,	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.
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12- 0, 68515-48-0)	analysis was performed by GC/MS.)	mg/kg	50	n.d.
娜苯二甲酸二正辛酯 (DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)		mg/kg	50	n.d.
鄰苯二甲酸二正戌酯 (DNPP) (Di-n- pentyl phthalate (DNPP)) (CAS No.: 131-18-0)		mg/kg	50	n.d.
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.

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1
六溴環十二烷及所有主要被辨別出的異構物(HBCDD) ( $\alpha$ - HBCDD, $\beta$ - HBCDD, $\gamma$ - HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ - HBCDD, $\beta$ - HBCDD, $\gamma$ - HBCDD)) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	参考IEC 62321-9: 2021・以氣相層析儀/質譜儀分析・(With reference to IEC 62321-9: 2021, analysis was performed by GC/MS.)	mg/kg	20	n.d.
氟 (F) (Fluorine (F)) (CAS No.: 14762-94-8)		mg/kg	50	n.d.
氯 (CI) (Chlorine (CI)) (CAS No.: 22537- 15-1)	   参考BS EN 14582: 2016 · 以離子層析儀分析。   0Alith reference to BS EN 14582: 2016   applying	mg/kg	50	n.d.
溴 (Br) (Bromine (Br)) (CAS No.: 10097- 32-2)	(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.
全氟辛烷磺酸及其鹽類 (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	参考CEN/TS 15968: 2010・以液相層析串聯質譜 儀分析・(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.
全氟辛酸及其鹽類 (PFOA and its salts) (CAS No.: 335-67-1 and its salts)	参考CEN/TS 15968: 2010・以液相層析串聯質譜 儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.

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SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



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測試項目	測試方法	單位	MDL	結果
(Test Items)	(Method)	(Unit)		(Result)
				No.1
聚氯乙烯 (Polyvinyl chloride) (PVC)	參考ASTM E1252: 2013 · 以傅立葉轉換紅外線光	**	_	Negative
	譜儀及焰色法分析。(With reference to ASTM			
	E1252: 2013, analysis was performed by FT-IR			
	and Flame Test.)	٠		
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440-	參考US EPA 3052: 1996 · 以感應耦合電漿發射光	mg/kg	2	721
36-0)	譜儀分析。(With reference to US EPA 3052:	,		
	1996, analysis was performed by ICP-OES.)			
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-	參考US EPA 3052: 1996,以感應耦合電漿發射光	mg/kg	2	n.d.
41-7)	譜儀分析。(With reference to US EPA 3052:			
	1996, analysis was performed by ICP-OES.)			

#### 備註(Note):

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 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. 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.
- 8. 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.
- 9. 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 sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value.

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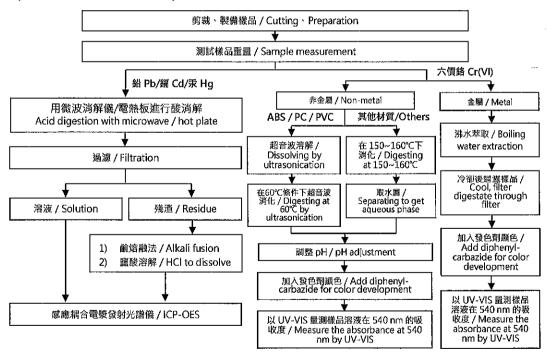
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### 重金屬流程圖 / Analytical flow chart of Heavy Metal

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)



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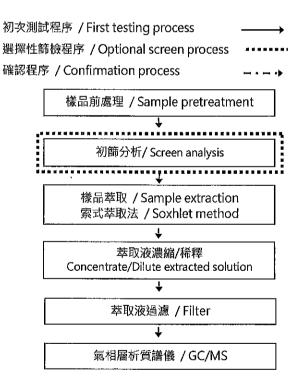
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### 多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs



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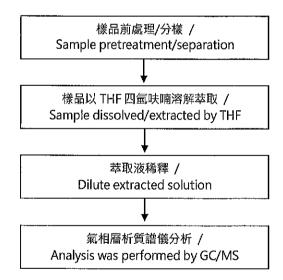
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#### 可塑劑分析流程圖 / Analytical flow chart - Phthalate

#### 【測試方法/Test method: IEC 62321-8】



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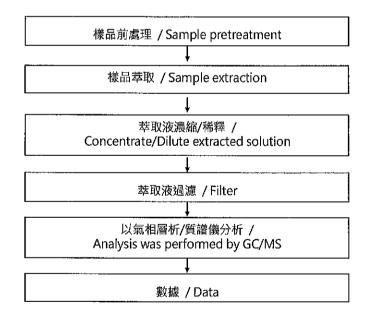
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### 六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD



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SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



# **Test Report**

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日期(Date): 18-Mar-2022

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西北臺慶科技股份有限公司 (TAI-TECH ADVANCED ELECTRONICS CO., LTD.)

臺慶精密電子 (昆山) 有限公司 (TAI-TECH ADVANCED ELECTRONICS (KUN-SHAN) CO., LTD.)

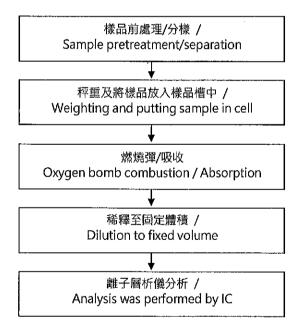
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#### 鹵素分析流程圖 / Analytical flow chart - Halogen



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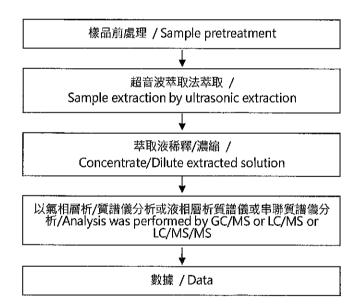
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全氟化合物(包含全氟辛酸/全氟辛烷磺酸/其相關化合物等等)分析流程圖 / Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)



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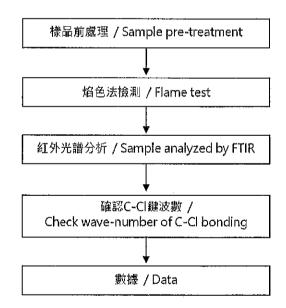
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#### 聚氯乙烯物質判定分析流程圖 / Analysis flow chart - PVC



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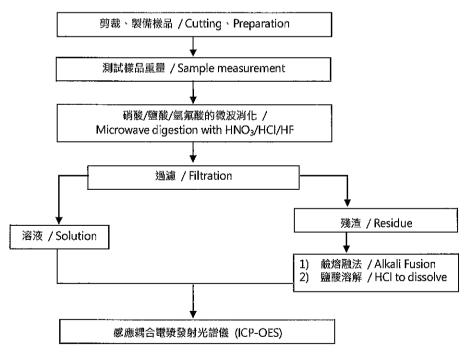
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### 元素(含重金屬)分析流程圖 / Analytical flow chart of Elements (Heavy metal included)

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 3051A、US EPA 3052】



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

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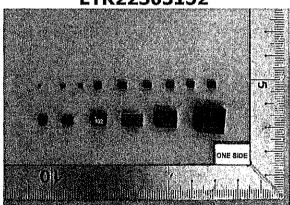
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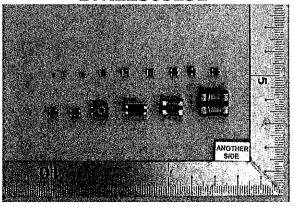
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\* 照片中如有箭頭標示,則表示為實際檢測之樣品/部位. \*
(The tested sample / part is marked by an arrow if it's shown on the photo.)

### ETR22303152



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\*\* 報告結尾 (End of Report) \*\*

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