

Specification for Approval

Date: 2025/4/16


Customer : **Blume**

TAI-TECH P/N: **HCI1005FQ-Series-MS8**

CUSTOMER P/N:

DESCRIPTION:

QUANTITY: pcs

REMARK:

Customer Approval Feedback

西北臺慶科技股份有限公司
TAI-TECH Advanced Electronics Co., Ltd

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High Frequency Chip Inductor (Lead Free)

HCI1005FQ-Series-MS8

ECN HISTORY LIST					
REV	DATE	DESCRIPTION	APPROVED	CHECKED	DRAWN
1.0	25/04/16	初版發行	鍾百烜	羅偉軒	張嘉玲
備 註					

High Frequency Chip Inductor (Lead Free)

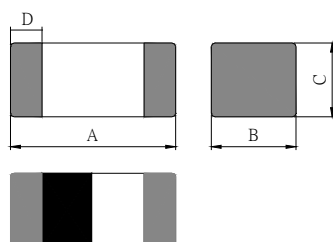
HCI1005FQ-Series-MS8

1. Features

1. Monolithic inorganic material construction.
2. Closed magnetic circuit avoids crosstalk.
3. S.M.T. type.
4. Suitable for reflow soldering.
5. Shapes and dimensions follow E.I.A. spec.
6. Available in various sizes.
7. Excellent solder ability and heat resistance.
8. High SRF up to 6GHz and above.
9. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
10. Operating Temperature: -55~+105°C (Including self-temperature rise)



2. Dimensions



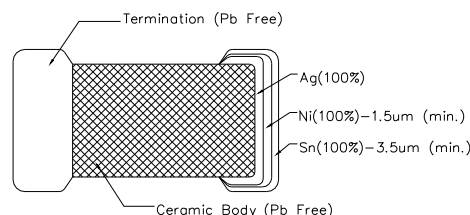
Chip Size	
A	1.00±0.15
B	0.50±0.15
C	0.50±0.15
D	0.25±0.10

Units: mm

3. Part numbering



A: Series
 B: Dimension L x W
 C: Category Code
 D: Inductance 2N2=2.2 nH
 E: Inductance Tolerance S=±0.3
 F: marking



4. Specification

Tai-Tech Part Number	Inductance (nH)	Test Frequency (Hz)	Q min.	Q(Typ.) 500MHz	Rated Current (mA) max.	DCR (Ω) max.	SRF (MHz) min.
HCI1005FQ-1N0S-MS8	1.0±0.3	100M / 50mV	8	22	1000	0.06	10000
HCI1005FQ-1N1S-MS8	1.1±0.3	100M / 50mV	8	23	1000	0.07	10000
HCI1005FQ-1N2S-MS8	1.2±0.3	100M / 50mV	8	23	1000	0.07	10000
HCI1005FQ-1N3S-MS8	1.3±0.3	100M / 50mV	8	22	1000	0.07	10000
HCI1005FQ-1N5S-MS8	1.5±0.3	100M / 50mV	8	23	1000	0.08	6000
HCI1005FQ-1N6S-MS8	1.6±0.3	100M / 50mV	8	23	1000	0.08	6000
HCI1005FQ-1N8S-MS8	1.8±0.3	100M / 50mV	8	20	900	0.08	6000
HCI1005FQ-2N0S-MS8	2.0±0.3	100M / 50mV	8	21	900	0.09	6000
HCI1005FQ-2N2S-MS8	2.2±0.3	100M / 50mV	8	22	900	0.09	6000
HCI1005FQ-2N4S-MS8	2.4±0.3	100M / 50mV	8	21	800	0.10	6000
HCI1005FQ-2N7S-MS8	2.7±0.3	100M / 50mV	8	22	800	0.12	6000

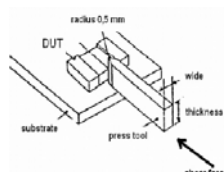
Tai-Tech Part Number	Inductance (nH)	Test Frequency (Hz)	Q min.	Q(Typ.) 500MHz	Rated Current (mA) max.	DCR (Ω) max.	SRF (MHz) min.
HCI1005FQ-3N0S-MS8	3.0 $\pm$ 0.3	100M / 50mV	8	24	800	0.12	6000
HCI1005FQ-3N3S-MS8	3.3 $\pm$ 0.3	100M / 50mV	8	24	800	0.13	6000
HCI1005FQ-3N6S-MS8	3.6 $\pm$ 0.3	100M / 50mV	8	21	700	0.15	4000
HCI1005FQ-3N9S-MS8	3.9 $\pm$ 0.3	100M / 50mV	8	22	700	0.16	4000
HCI1005FQ-4N3S-MS8	4.3 $\pm$ 0.3	100M / 50mV	8	24	700	0.16	4000
HCI1005FQ-4N7S-MS8	4.7 $\pm$ 0.3	100M / 50mV	8	23	700	0.16	4000
HCI1005FQ-5N1S-MS8	5.1 $\pm$ 0.3	100M / 50mV	8	23	600	0.16	4000
HCI1005FQ-5N6S-MS8	5.6 $\pm$ 0.3	100M / 50mV	8	22	600	0.20	4000
HCI1005FQ-6N2S-MS8	6.2 $\pm$ 0.3	100M / 50mV	8	24	600	0.20	3900
HCI1005FQ-6N8J-MS8	6.8 $\pm$ 5%	100M / 50mV	8	23	600	0.20	3900
HCI1005FQ-7N5J-MS8	7.5 $\pm$ 5%	100M / 50mV	8	24	500	0.24	3700
HCI1005FQ-8N2J-MS8	8.2 $\pm$ 5%	100M / 50mV	8	23	500	0.24	3600
HCI1005FQ-9N1J-MS8	9.1 $\pm$ 5%	100M / 50mV	8	24	500	0.26	3400
HCI1005FQ-10NJ-MS8	10 $\pm$ 5%	100M / 50mV	8	24	500	0.26	3200
HCI1005FQ-12NJ-MS8	12 $\pm$ 5%	100M / 50mV	8	23	400	0.50	2700
HCI1005FQ-15NJ-MS8	15 $\pm$ 5%	100M / 50mV	8	23	400	0.50	2300
HCI1005FQ-18NJ-MS8	18 $\pm$ 5%	100M / 50mV	8	23	350	0.60	2100
HCI1005FQ-20NJ-MS8	20 $\pm$ 5%	100M / 50mV	8	21	350	0.60	2000
HCI1005FQ-22NJ-MS8	22 $\pm$ 5%	100M / 50mV	8	22	350	0.60	1900
HCI1005FQ-27NJ-MS8	27 $\pm$ 5%	100M / 50mV	8	20	300	0.70	1600
HCI1005FQ-33NJ-MS8	33 $\pm$ 5%	100M / 50mV	8	20	300	0.80	1300
HCI1005FQ-39NJ-MS8	39 $\pm$ 5%	100M / 50mV	8	20	250	1.00	1200
HCI1005FQ-43NJ-MS8	43 $\pm$ 5%	100M / 50mV	8	20	250	1.10	1100
HCI1005FQ-47NJ-MS8	47 $\pm$ 5%	100M / 50mV	8	19	250	1.10	1000
HCI1005FQ-56NJ-MS8	56 $\pm$ 5%	100M / 50mV	8	19	200	1.20	750
HCI1005FQ-68NJ-MS8	68 $\pm$ 5%	100M / 50mV	8	17	200	1.40	750
HCI1005FQ-82NJ-MS8	82 $\pm$ 5%	100M / 50mV	8	16	200	1.60	750
HCI1005FQ-R10J-MS8	100 $\pm$ 5%	100M / 50mV	8	17	200	2.00	700
HCI1005FQ-R12J-MS8	120 $\pm$ 5%	100M / 50mV	8	12	150	2.50	600
HCI1005FQ-R15J-MS8	150 $\pm$ 5%	100M / 50mV	8	11	150	3.00	550
HCI1005FQ-R18J-MS8	180 $\pm$ 5%	100M / 50mV	8	-	150	3.50	500
HCI1005FQ-R22J-MS8	220 $\pm$ 5%	100M / 50mV	8	-	100	3.70	450
HCI1005FQ-R27J-MS8	270 $\pm$ 5%	100M / 50mV	8	-	100	4.50	400
HCI1005FQ-R33J-MS8	330 $\pm$ 5%	50M / 50mV	6	-	80	5.00	350
HCI1005FQ-R36J-MS8	360 $\pm$ 5%	50M / 50mV	6	-	80	6.00	300

- Rated current: based on temperature rise test
- In compliance with EIA 595
- All test data referenced to 25°C ambient.

5. Reliability and test condition

Item	Performance	Test Condition															
Series No.	HCI	--															
Operating Temperature	-55~+105℃ (Including self-temperature rise)	--															
Transportation storage temperature	-55~+105℃ (on board)	For long storage conditions, please see the application notice															
Inductance (Ls)	Refer to standard electrical characteristics list	Agilent4291															
Q Factor		Agilent E4991															
DC Resistance		Agilent4287															
Rated current		Agilent16192															
		Agilent 4338															
		DC power supply Over rated current requirements, there will be some risk															
Temperature rise test	Rated Current < 1A ΔT 20℃Max Rated Current ≥ 1A ΔT 40℃Max	1. Applied the allowed DC current. 2. Temperature measured by digital surface thermometer.															
Life test	Appearance: no damage. Inductance: within±10%of initial value. Q : Shall not exceed the specification value. DCR : within ±15% of initial value and shall not exceed the specification value	Preconditioning: run through reflow for 3 times.(IPC/JEDEC J-STD-020F classification reflow profiles) Temperature: 105±2℃ Applied current: rated current. Duration: 1000±12hrs. Measured at room temperature after placing for 24 hrs.															
Load humidity		Preconditioning: run through reflow for 3 times.(IPC/JEDEC J-STD-020F classification reflow profiles) Humidity: 85±3%R.H. Temperature: 85±2℃ . Duration: 1000hrs Min. Bead: with 100% rated current. Inductance: with 10% rated current. Measured at room temperature after placing for 24 hrs.															
Thermal shock	Appearance: no damage. Inductance: within±10%of initial value. Q : Shall not exceed the specification value. DCR : within ±15% of initial value and shall not exceed the specification value	Preconditioning: run through reflow for 3 times.(IPC/JEDEC J-STD-020F classification reflow profiles) Condition for 1 cycle Step1: -55±2℃ 30±5 min. Step2: +105±2℃ ≤0.5min Step3: +105±2℃ 30±5min. Number of cycles: 500 Measured at room temperature after placing for 24 hrs.															
Vibration	Appearance : No damage. Inductance : within±10% of initial value Q : Shall not exceed the specification value. DCR : within ±15% of initial value and shall not exceed the specification value	Preconditioning: run through reflow for 3 times.(IPC/JEDEC J-STD-020F classification reflow profiles) Oscillation Frequency: 10Hz~2KHz~10Hz for 20 minutes Equipment : Vibration checker Total Amplitude:10g Testing time : 12 hours(20 minutes, 12 cycles each of 3 orientations) °															
Bending	Appearance : No damage. Inductance : within±10% of initial value Q : Shall not exceed the specification value. DCR : within ±15% of initial value and shall not exceed the specification value	Shall be mounted on a FR4 substrate of the following dimensions: >=0805inch(2012mm):40x100x1.2mm <0805inch(2012mm):40x100x0.8mm Bending depth: >=0805inch(2012mm):1.2mm <0805inch(2012mm):0.8mm Duration of 10 sec.															
Shock	Appearance : No damage. Inductance : within±10% of initial value Q : Shall not exceed the specification value. DCR : within ±15% of initial value and shall not exceed the specification value	Preconditioning: run through reflow for 3 times.(IPC/JEDEC J-STD-020F classification reflow profiles) Test condition: <table><tr><td>Type</td><td>Peak Value (g's)</td><td>Normal duration (D) (ms)</td><td>Wave form</td><td>Velocity change (V)/ft/sec</td></tr><tr><td>SMD</td><td>50</td><td>11</td><td>Half-sine</td><td>11.3</td></tr><tr><td>Lead</td><td>50</td><td>11</td><td>Half-sine</td><td>11.3</td></tr></table> 3 shocks in each direction along 3 perpendicular axes(18 shocks).	Type	Peak Value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (V)/ft/sec	SMD	50	11	Half-sine	11.3	Lead	50	11	Half-sine	11.3
Type	Peak Value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (V)/ft/sec													
SMD	50	11	Half-sine	11.3													
Lead	50	11	Half-sine	11.3													
Insulation resistance	IR>1GΩ	Chip Inductor only Test voltage:100±10%V for 30Sec.															

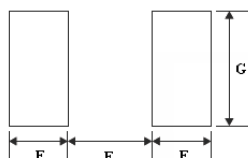
Item	Performance	Test Condition						
Solderability	More than 95% of the terminal electrode should be covered with solder.	a. Method B, 4 hrs @155°C dry heat @235°C±5°C Test time: 5 +0/-0.5 seconds. b. Method D category 3. (steam aging 8hours ± 15 min) @ 260°C±5°C Test time: 30 +0/-0.5 seconds.						
Resistance to soldering heat	Appearance : No damage. Inductance : within ±10% of initial value Q : Shall not exceed the specification value. DCR : within ±15% of initial value and shall not exceed the specification value	Number of heat cycles: 1 <table border="1"> <tr> <th>Temperature (°C)</th><th>Time (s)</th><th>Temperature ramp/immersion and emersion rate</th></tr> <tr> <td>260 ±5 (solder temp)</td><td>10 ±1</td><td>25mm/s ±6 mm/s</td></tr> </table> Depth: completely cover the termination	Temperature (°C)	Time (s)	Temperature ramp/immersion and emersion rate	260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s
Temperature (°C)	Time (s)	Temperature ramp/immersion and emersion rate						
260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s						
Terminal strength	Appearance : No damage. Inductance : within ±10% of initial value Q : Shall not exceed the specification value. DCR : within ±15% of initial value and shall not exceed the specification value	Preconditioning: run through reflow for 3 times. (IPC/JEDEC J-STD-020F classification reflow profiles) Component mounted on a PCB apply a force >0.805inch(2012mm): 1kg <=0.805inch(2012mm): 0.5kg 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 shock the component being tested.						



6. Soldering and Mounting

6-1. Recommended PC Board Pattern

Chip Size						Land Patterns For Reflow Soldering		
Series	Type	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F(mm)	G(mm)
HCI	1005	1.00±0.15	0.50±0.15	0.50±0.15	0.25±0.10	0.50	0.40	0.60



PC board should be designed so that products can prevent damage from mechanical stress when warping the board.

6-2. 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.

6-2.1 Soldering Reflow:

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

6-2.2 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
- Never contact the ceramic with the iron tip
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- 350°C tip temperature (max)
- 1.0mm tip diameter (max)
- Limit soldering time to 4~5sec.

Fig.1 Soldering Reflow

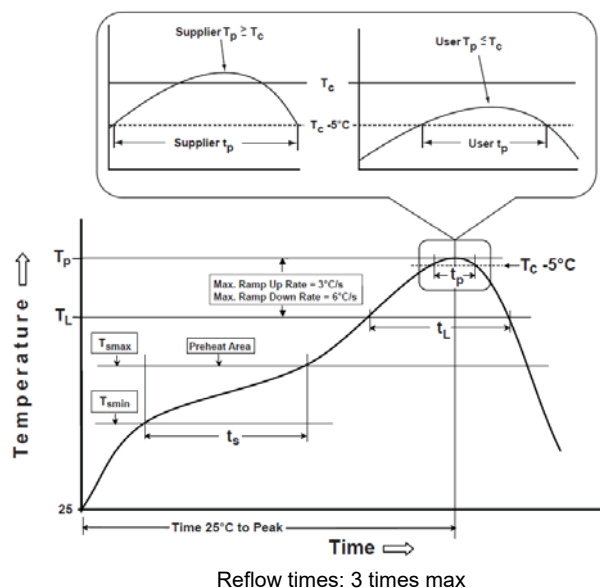


Fig.2 Iron soldering temperature profiles

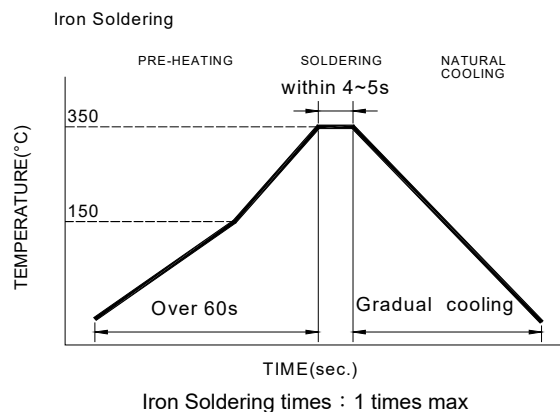


Table (1.1): Reflow Profiles

Profile Type:	Pb-Free Assembly
Preheat	
-Temperature Min(T_{smin})	150°C
-Temperature Max(T_{smax})	200°C
-Time(t_s)from(T_{smin} to T_{smax})	60-120seconds
Ramp-up rate(T_L to T_p)	3°C/second max.
Liquidus temperature(T_L)	217°C
Time(t_L)maintained above T_L	60-150 seconds
Classification temperature(T_c)	See Table (1.2)
Time(t_p) at $T_c - 5^\circ\text{C}$ (T_p should be equal to or less than T_c .)	< 30 seconds
Ramp-down rate(T_p to T_L)	6°C /second max.
Time 25°C to peak temperature	8 minutes max.

T_p: maximum peak package body temperature, **T_c**: the classification temperature.

For user (customer) **T_p** should be equal to or less than **T_c**.

Table (1.2) Package Thickness/Volume and Classification Temperature (T_c)

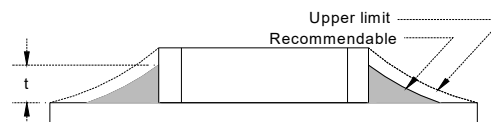
	Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

Reflow is referred to standard IPC/JEDEC J-STD-020F.

6-2.3 Solder Volume:

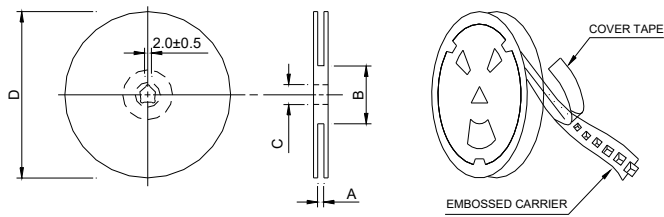
Accordingly increasing the solder volume, the mechanical stress to product is also increased. Exceeding solder volume may cause the failure of mechanical or electrical performance. Solder shall be used not to be exceed as shown in right side:

Minimum fillet height = soldering thickness + 25% product height



7. Packaging Information

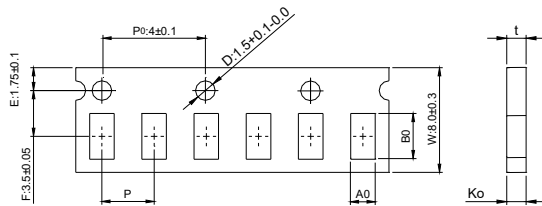
7-1. Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
7"x8mm	8+1.5	57±2	12.5±1.5	178±2

7-2 Tape Dimension / 8mm

■ Material of taping is paper

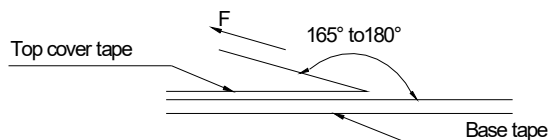


Size	B0(mm)	A0(mm)	Ko(mm)	P(mm)	t(mm)
100505	1.15±0.10	0.65±0.10	0.80max	2.0±0.10	0.80max

7-3. Packaging Quantity

Chip Size	100505
Chip / Reel	10000
Inner box	50000
Middle box	250000
Carton	500000

7-4. Tearing Off Force

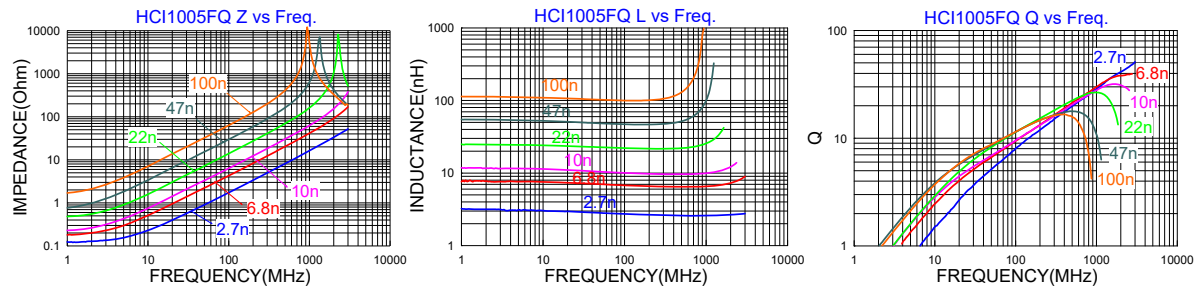


The force for tearing off cover tape is 15 to 60 grams in the arrow direction under the following conditions.

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

Application Notice

- Storage Conditions(component level)
To maintain the solder ability of terminal electrodes:
 - TAI-TECH products meet IPC/JEDEC J-STD-020F standard-MSL, level 1.
 - Temperature and humidity conditions: Less than 40°C and 60% RH.
 - Recommended products should be used within 12 months from the time of delivery.
 - The packaging material should be kept where no chlorine or sulfur exists in the air.
- Transportation
 - Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
 - The use of tweezers or vacuum pick up is strongly recommended for individual components.
 - Bulk handling should ensure that abrasion and mechanical shock are minimized.

Impedance, Inductance, Q v.s. Frequency Characteristics(Typical)



簽名有效

For Question Please
Contact with SGS
www.sgs.com.tw

測試報告

Test Report

號碼(No.): ETR25202935

日期(Date): 19-Feb-2025

頁數(Page): 1 of 12

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.)

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

將大科技股份有限公司 (JDX TECHNOLOGY CO., LTD.)

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江蘇省昆山市鐘朗昆嘉高科技工業區郭澤路 (GUO-ZE ROAD, KUNJIA HI-TECH INDUSTRIAL PARK, KUN-SHAN, JIANG-SU, CHINA)

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)

臺北市信義區信義路5段5號3樓E06室 (ROOM E06, 3RD FLOOR, NO.5, SECTION 5, XINYI ROAD, XINYI DISTRICT, TAIPEI CITY, TAIWAN)

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) : CERAMIC SERIES

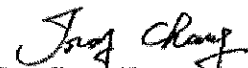
樣品型號(Style/Item No.) : HCI、HCI-M、THI、THI-M、WPC(YPC)、TLF SERIES

收件日(Sample Receiving Date) : 12-Feb-2025

測試期間(Testing Period) : 12-Feb-2025 to 19-Feb-2025

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 Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei



PIN CODE: 2C48C189

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測試報告

Test Report

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日期(Date): 19-Feb-2025

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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 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013 · 以感應耦合電漿發射光譜儀分析 · (With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
鉛 (Pb) (Lead (Pb))	參考IEC 62321-5: 2013 · 以感應耦合電漿發射光譜儀分析 · (With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	26.9
汞 (Hg) (Mercury (Hg))	參考IEC 62321-4: 2013+ AMD1: 2017 · 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-OES.)	mg/kg	2	n.d.
六價鉻 Cr(VI) (Hexavalent Chromium Cr(VI))	參考IEC 62321-7-2: 2017 · 以紫外光-可見光分光光度計分析 · (With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.)	mg/kg	8	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
一溴聯苯 (Monobromobiphenyl)	參考IEC 62321-6: 2015, 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.)	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)		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.
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)		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)		mg/kg	5	n.d.
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP))	參考IEC 62321-8: 2017, 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP))		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
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP))	參考IEC 62321-8: 2017，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP))		mg/kg	50	n.d.
鄰苯二甲酸二異癸酯 (DIDP) (Disodecyl 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)		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.
鄰苯二甲酸二正己酯 (DNHP) (Di-n-hexyl phthalate (DNHP)) (CAS No.: 84-75-3)	參考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	50	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))		mg/kg	20	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
氟 (F) (Fluorine (F)) (CAS No.: 14762-94-8)	參考BS EN 14582: 2016，以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.
氯 (Cl) (Chlorine (Cl)) (CAS No.: 22537-15-1)		mg/kg	50	n.d.
溴 (Br) (Bromine (Br)) (CAS No.: 10097-32-2)		mg/kg	50	n.d.
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440-36-0)	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.
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-41-7)		mg/kg	2	n.d.

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. 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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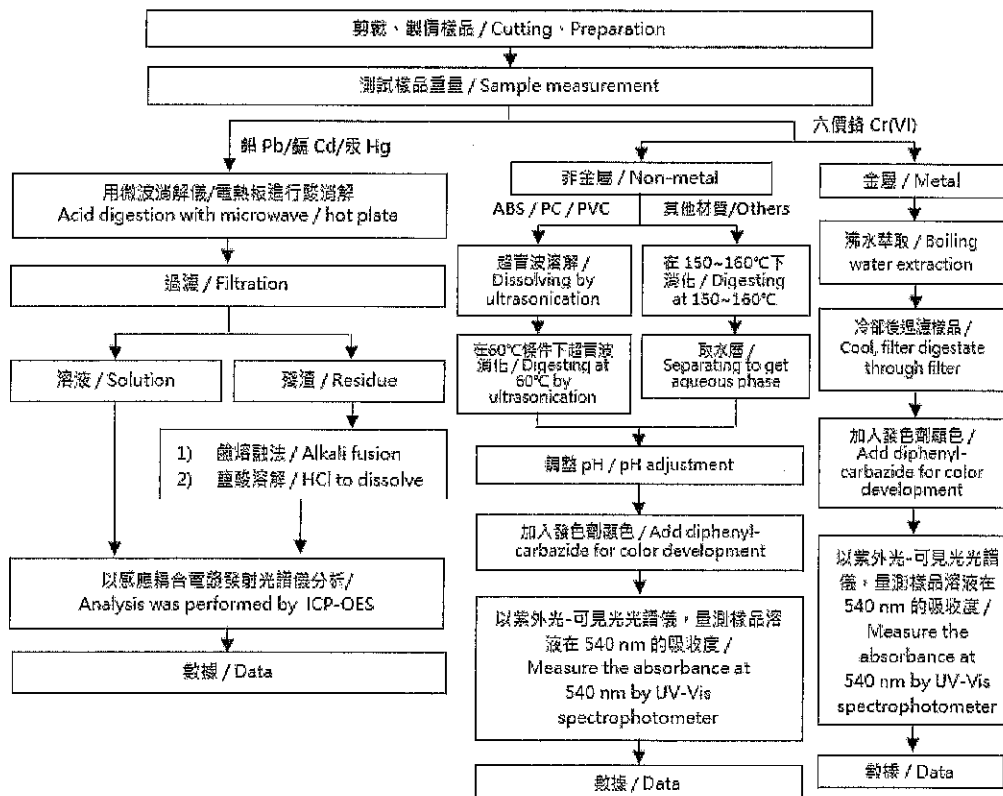
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重金屬流程图 / Analytical flow chart of heavy metal

根據以下的流程图之條件，樣品已完全溶解。(六價鉻測試方法除外)

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

(Cr⁶⁺ test method excluded)



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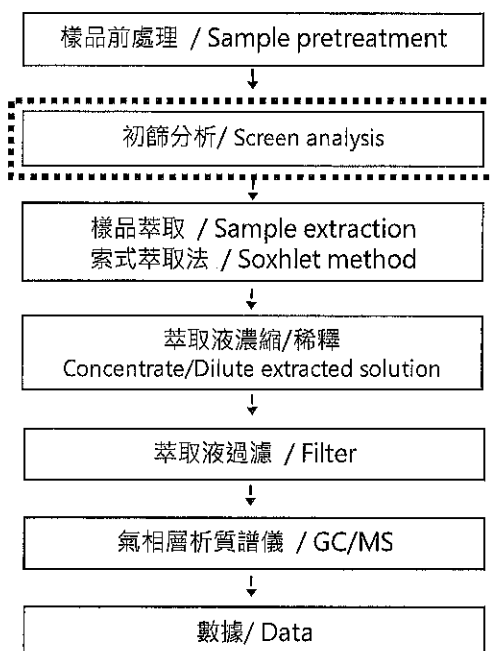
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多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs

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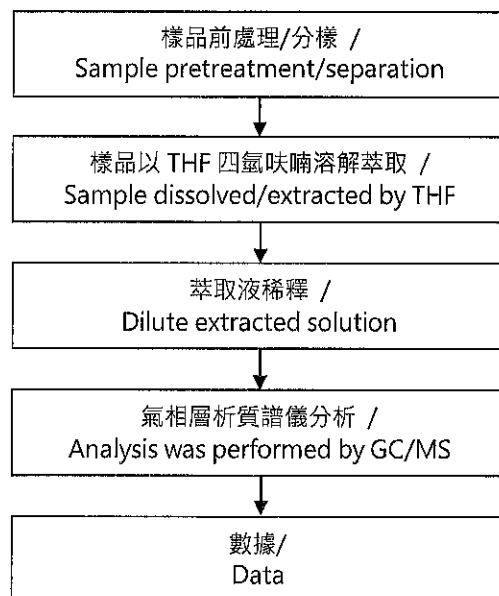
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可塑劑分析流程圖 / Analytical flow chart - Phthalate

【測試方法/Test method: IEC 62321-8】



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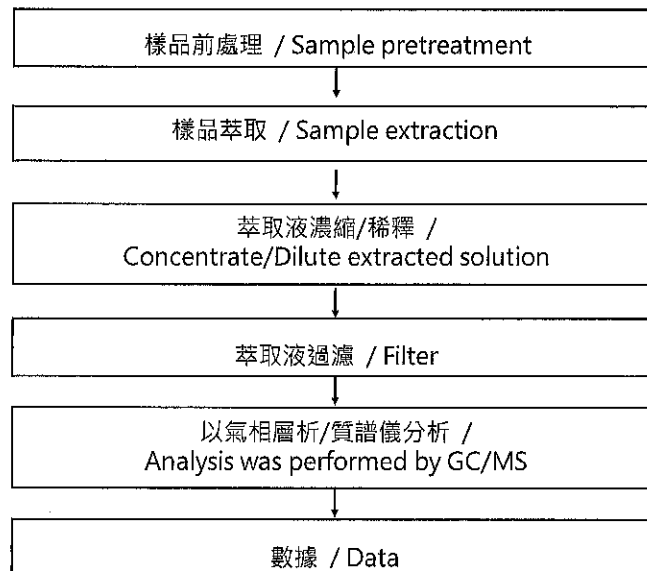
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六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD



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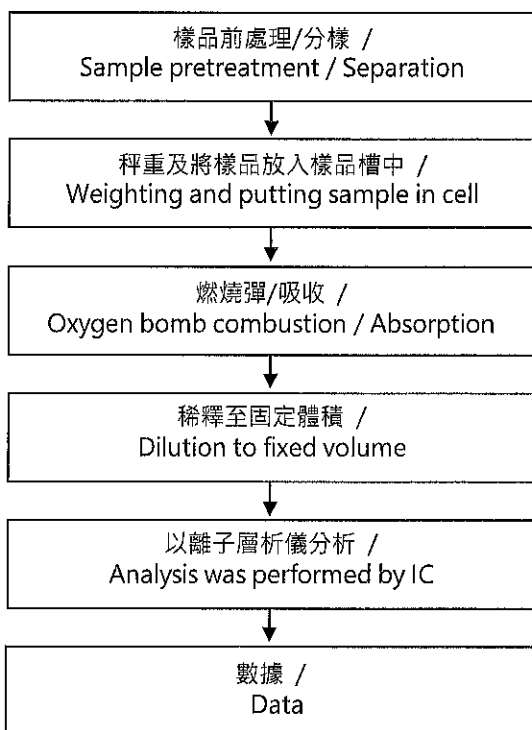
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鹵素分析流程圖 / Analytical flow chart - Halogen



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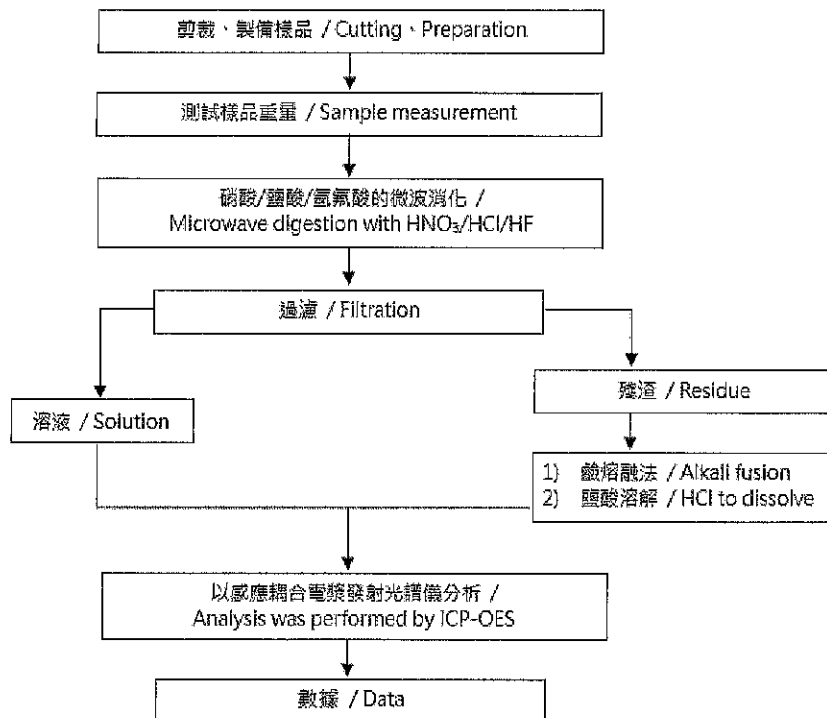
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元素(含重金屬)分析流程圖 / Analytical flow chart of elements (Heavy metal included)

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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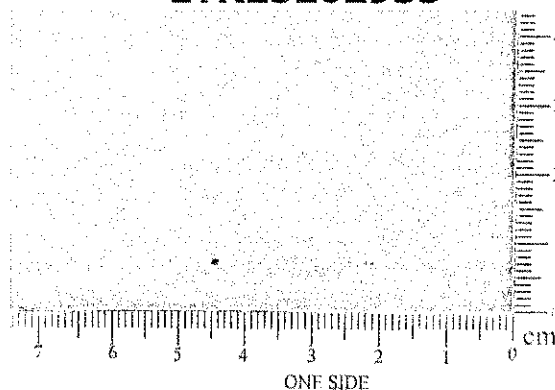
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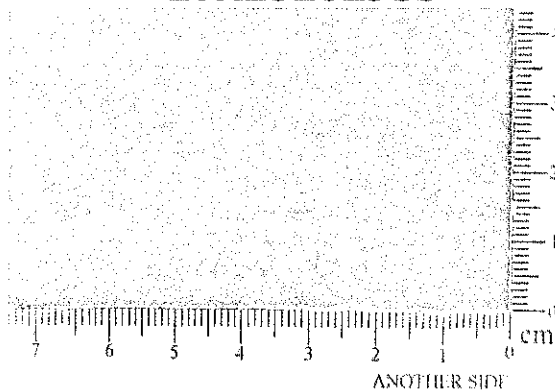
* 照片中如有箭頭標示·則表示為實際檢測之樣品/部位.*

(The tested sample / part is marked by an arrow if it's shown on the photo.)

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