



SYNTON-TECH CORPORATION
THERMAL FUSE RESISTORS
(FTM TYPE)

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Version:	B
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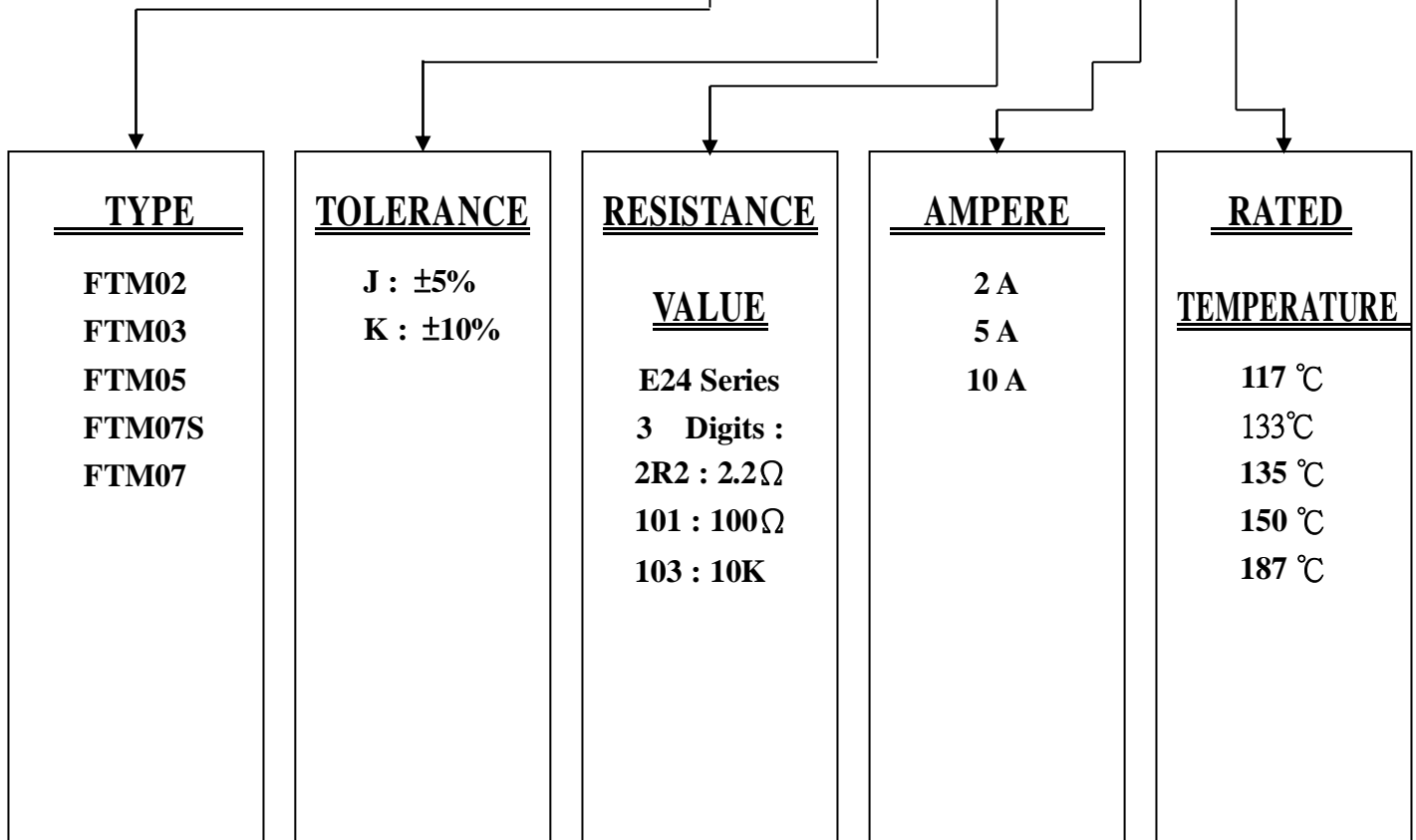
1. FEATURES

Since thermal fuses are incorporated , resistors respond quickly to overloading as well as external overheating .
 These resistors also provide outstanding features against surges.
 Therefore they are suitable for the prevention of inrush current for switching power supply.

2. EXPLANATIONS OF ORDERING CODE

DESCRIPTION : FTM05 5% 5.1Ω 2A 135°C

SYNTON CODE : FTM05 J 5R1 2A 135



APPROVED	CHECKED	DESIGNED	REMARK	DOCUMENT NO.
Carol	May	Chen	RE:SGS	0201010178



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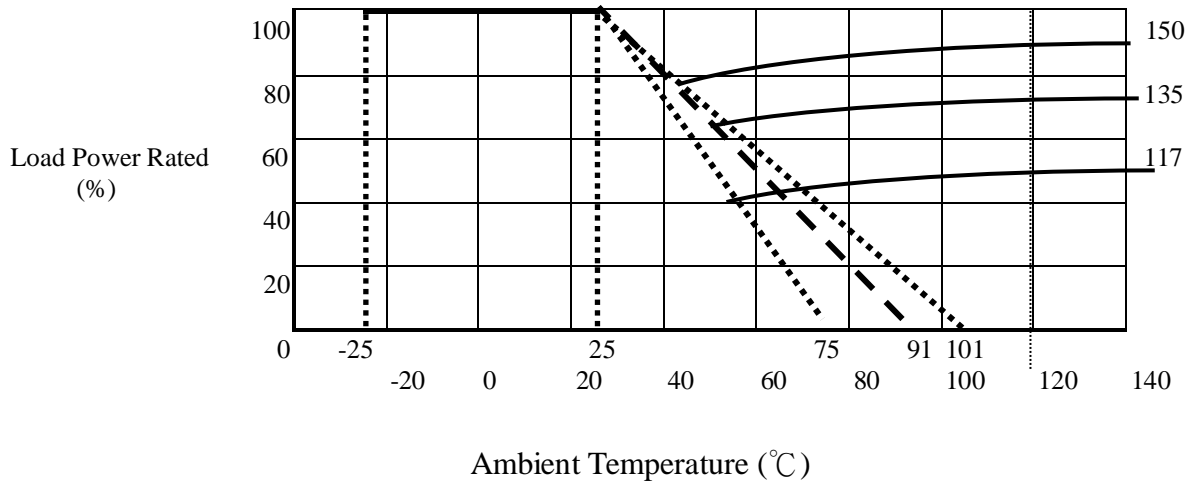
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3. ELECTRICAL CHARACTERISTICS

STYLE	FTM02		FTM03		FTM05		FTM07S		FTM07		
	Rated wattage	1.0W	1.5W	1.5W	2W	1.6W	2.1W	1.8W	2.3W	2.2W	2.7W
Resistance Tolerance	J : ± 5% K : ± 10%										
Resistance Range	1 Ω ~ 10K Ω										
Current Ration (A)	2 ~ 10 (A)										
Rated Temperature(°C)	117	135	135	150	135	133	150	135	150	135	150
Cut-off Temperature (°C)	112±4	130±4	130±4	145±4	130±4	129±2	145±4	130±4	145±4	130±4	145±4

Figure 1

4. DERATING CURVE

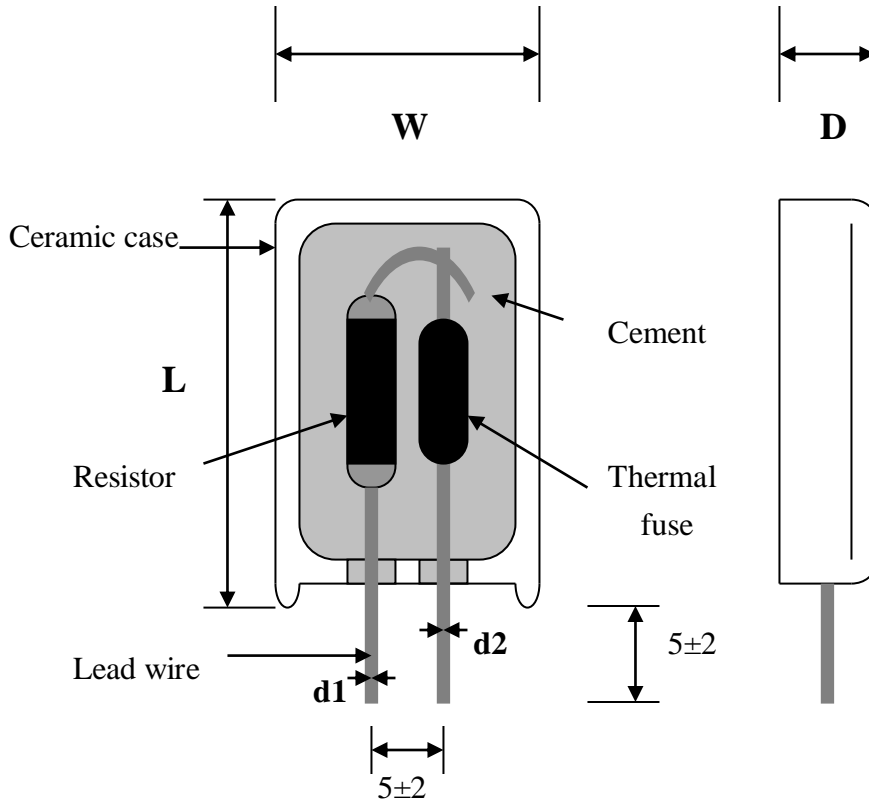




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5. DIMENSIONS



Unit:m/m

TYPE	W	D	L	d1	d2
FTM02	11.5 ± 1.5	7.5 ± 1.5	20.5 ± 1.5	0.5 ± 0.1	2A (0.6 ± 0.1) 5A (1.0 ± 0.1) 10A (1.0 ± 0.1)
FTM03	12.5 ± 1.5	8.5 ± 1.5	25.0 ± 1.5	0.7 ± 0.1	
FTM05	12.5 ± 1.5	9.0 ± 1.5	25.0 ± 1.5	0.7 ± 0.1	
FTM07S	12.5 ± 1.5	9.0 ± 1.5	25.0 ± 1.5	0.7 ± 0.1	
FTM07	12.5 ± 1.5	9.0 ± 1.5	39.0 ± 1.5	0.7 ± 0.1	

Figure2



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6. PERFRMAMCE

(1) T.C.R.

Test Method : Room temperature / 100°C up
Acceptance Standard : $\pm 400\text{ppm}/^\circ\text{C}$

(2) Short time overload

Test Method : Power rating **X 2.5**, for 5s
Acceptance Standard : $\pm (2\%+0.05 \Omega)$

(3) Solderbility

Test Method : 235°C $\pm 5^\circ\text{C}$, 2s
Acceptance Standard : 95% Coverage min.

(4) Terminal strength

Test Method : (Direct load : 20N, 10s)
(Bending test : 2cycles)
Acceptance Standard : No mechanical damages

(5) Moisture resistance

Test Method : 40°C, 90% ~ 95% RH , 500h No load
Acceptance Standard : $\pm (5\%+0.05 \Omega)$

(6) Load life

Test Method : Rating voltage, 25°C, 1000h, 1.5h ON /
0.5 OFF cycle
Acceptance Standard : $\pm (5\%+0.05 \Omega)$

● **Rated continuous Working Voltage (RCWV)**

$$= \sqrt{\text{power rating} \times \text{resistance value}}$$



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Test Report

欣統股份有限公司 / SYNTECH CORPORATION

(東莞市欣統電子有限公司 / SYNTRONIC CORPORATION)

台灣省新北市汐止區新台五路一段79號16樓之3 / 16F-3, NO. 79, FAR EAST WORLD CENTER SEC. 1,

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(廣東省東莞市大朗鎮水口村水常一路13號 / NO. 13, SHUI CHANG YI RD., SHUI KOU INDUSTRIAL ZONE DA LANG, DONG GUAN, GUANG DONG, 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/on behalf of the applicant as):

樣品名稱(Sample Description) : CEMENT FIXED RESISTORS
 樣品型號(Style/Item No.) : SQP, SQM, SQT, SQZ, SQH, SQS, SQF, SQHG, FTM TYPE
 收件日期(Sample Receiving Date) : 2018/03/31
 測試期間(Testing Period) : 2018/03/31 TO 2018/04/11

測試需求(Test Requested) : 依據客戶指定，進行鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚測試。(As specified by client, to test Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample(s).)

測試方法(Test Method) : 請參閱下一頁 (Please refer to following pages).

測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages).

Troy Chang, Manager, Tech
 Signed for and on behalf of
 SGS TAIWAN LTD.
 Chemical Laboratory - Taipei

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測試結果(Test Results)

測試部位(PART NAME)No. 1 : 整體混測 (MIXED ALL PARTS)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No. 1
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合電漿 原子發射光譜儀檢測。 / With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n. d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合電漿 原子發射光譜儀檢測。 / With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n. d.
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4 (2013), 以感應耦合電漿 原子發射光譜儀檢測。 / With reference to IEC 62321-4 (2013) and performed by ICP-AES.	2	n. d.
六價鉻 / Hexavalent Chromium Cr(VI) (◆)	mg/kg	參考IEC 62321-7-2 (2017), 以UV-VIS檢測; 參 考IEC 62321-5 (2013), 以ICP-AES檢測。 / With reference to IEC 62321-7-2 (2017) and performed by UV-VIS. ; With reference to IEC 62321-5 (2013) and performed by ICP- AES.	8	n. d.
多溴聯苯總和 / Sum of PBBs	mg/kg		-	n. d.
一溴聯苯 / Monobromobiphenyl	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	參考IEC 62321-6 (2015), 以氣相層析/質 譜儀檢測。 / With reference to IEC	5	n. d.
五溴聯苯 / Pentabromobiphenyl	mg/kg	62321-6 (2015) and performed by GC/MS.	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.

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DONG GUAN, GUANG DONG, CHINA)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No. 1
多溴聯苯醚總和 / Sum of PBDEs	mg/kg	參考IEC 62321-6 (2015), 以氣相層析/質譜儀檢測。 / With reference to IEC 62321-6 (2015) and performed by GC/MS.	-	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.	

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. (◆) :
若鎘含量小於六價鎘之方法偵測極限值，則六價鎘為n. d.，不須再測試六價鎘。
The result of Cr(VI) is "n. d." as the result of Chromium (Cr) is less than the MDL of Cr(VI), and confirmation test of Cr(VI) is not required.
若鎘含量未小於六價鎘之方法偵測極限值，需進行六價鎘測試。
If the Chromium (Cr) content is not less than the MDL of Cr(VI), confirmation test of Cr(VI) is required.
6. 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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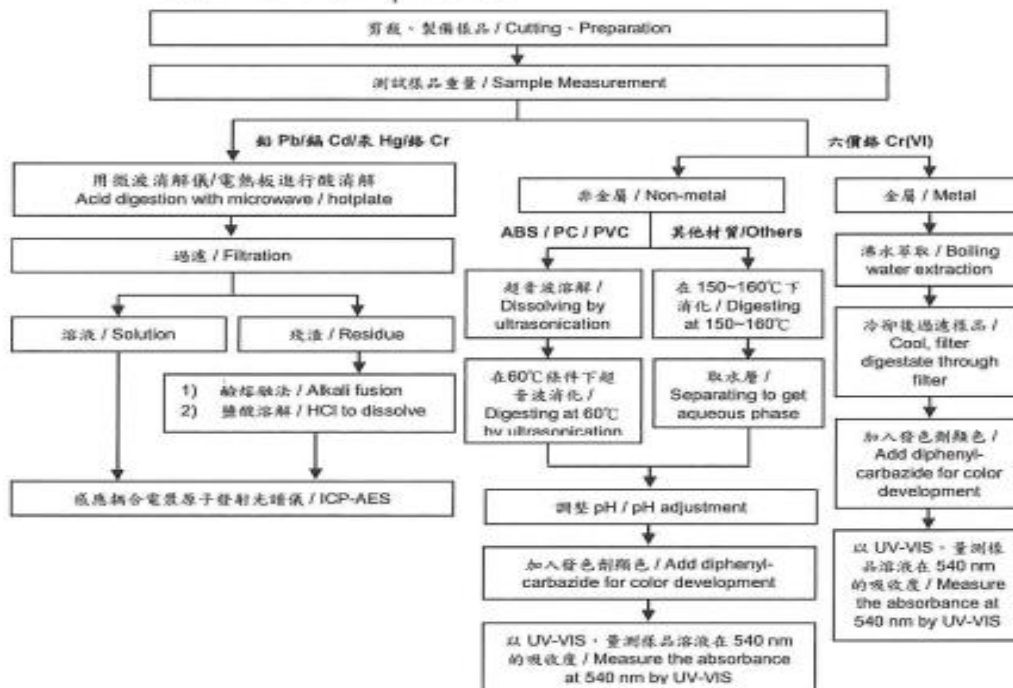
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重金屬流程圖 / Analytical flow chart of Heavy Metal

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^{VI} test method excluded)

- 測試人員: 王志璋 / Technician: JR Wang
- 測試負責人: 張啟興 / Supervisor: Troy Chang



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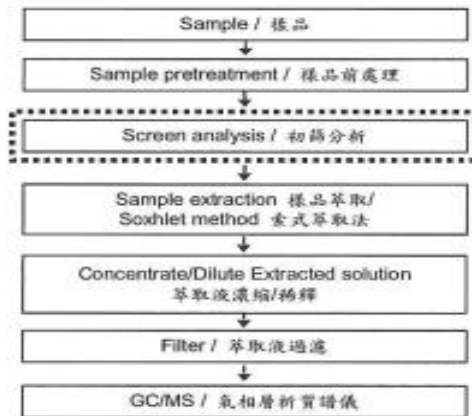
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多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBB/PBDE

- 測試人員：涂雅琴 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang

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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* 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.)

CE/2018/37911



CE/2018/37911



** 報告結尾 (End of Report) **

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