

# F7K series Thermal-Links/Resistor Assemblies

F7K系列 溫度保險絲附電阻器

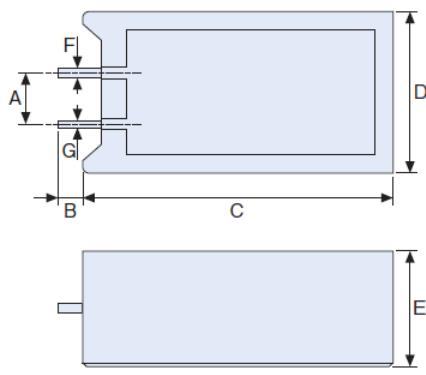


- Thermal-Links/Resistor Assemblies is a product that combined with thermal-links of fusible alloy type and 7W wire wound resistor type.
- F7K is RoHS compliance product, non-Pb and non-Cd contains.
- F7K got excellent interception characteristic when abnormality overload happened.
- Especially, F7K adopted excellent characteristic resistive element against the In-rush current, and it is the best for preventing In-rush current.
- 可熔合金型溫度保險絲和7W卷線電阻器組合成一體的製品。
- F7K 是不含鉛、鎘的製品。 (RoHS 對象製品)
- F7K 能在超負荷等異常時，發揮它的優越切斷特性。
- 特別地採用了對突入電流有優越性能的電阻元素，最適合防止突入電流。



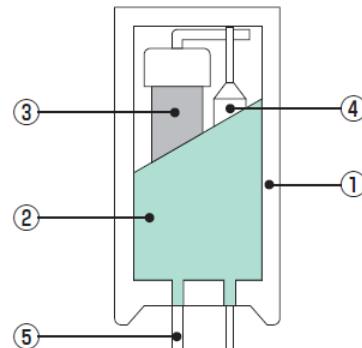
✓ Approved by UL/C-UL, TUV  
✓ 已通過認證: UL/C-UL, TUV

## Dimension 尺寸



Unit : mm	
A	5±0.5
B	3.5 + 1, -0.5
C	30±0.5
D	15±0.5
E	11±0.5
F	0.80±0.04
G	1.00±0.04

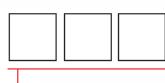
## Construction 構造圖



1	Ceramic case 陶瓷殼
2	Silicone cement 硅樹脂水泥
3	Resistance (Ceramic insulator) 電阻
4	Thermal-Links 溫度保險絲
5	Lead wire (Tin plated copper wire) 導線

## Models Component 型號構成

**F7K**



**J**



Series  
系列名

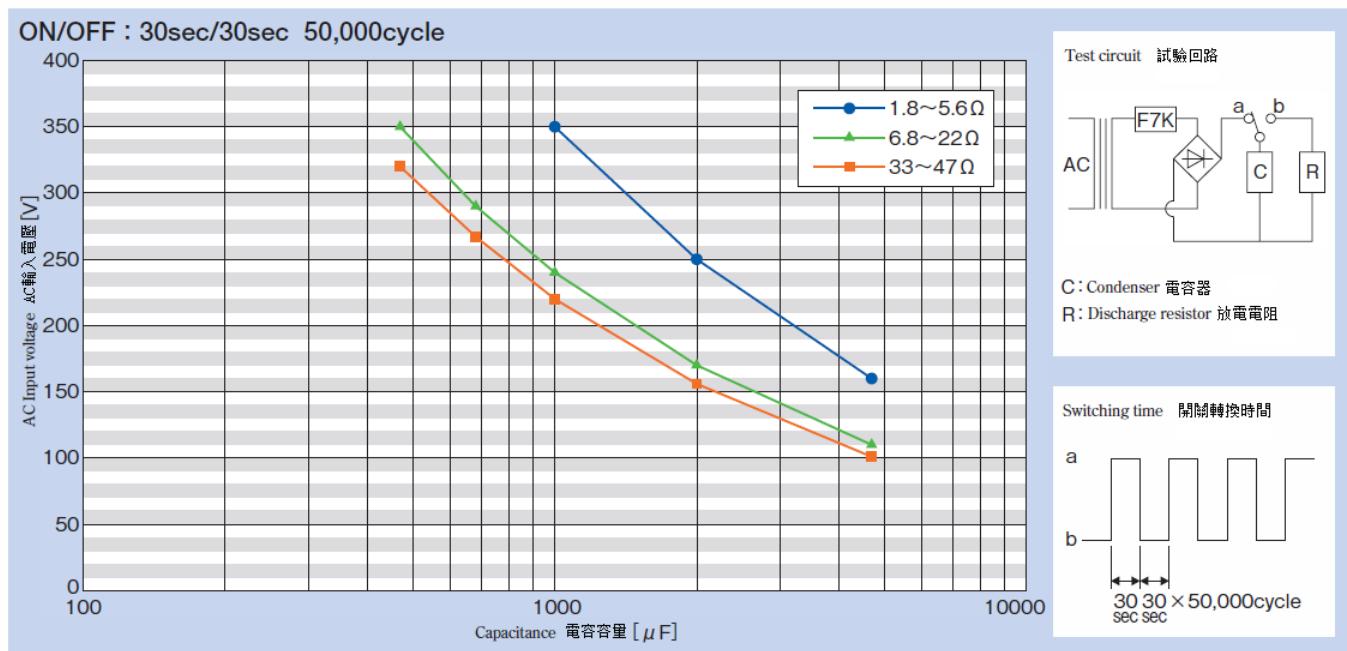
Nominal resistance value  
額定電阻值

Resistance tolerance  
電阻值容許偏差 J: ±5%

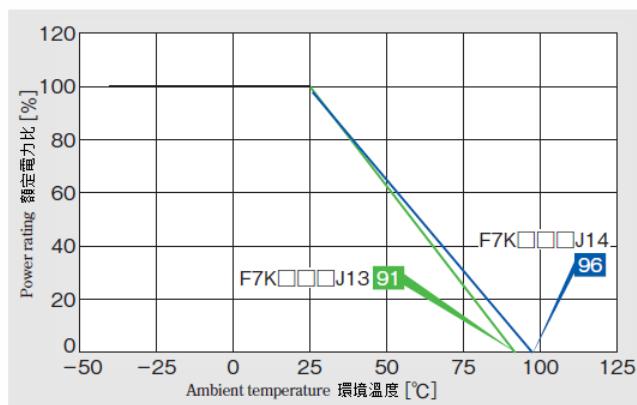
Thermal-Links 溫度保險絲  
13:Tf 136°C  
14:Tf 145°C

## Ratings 額定

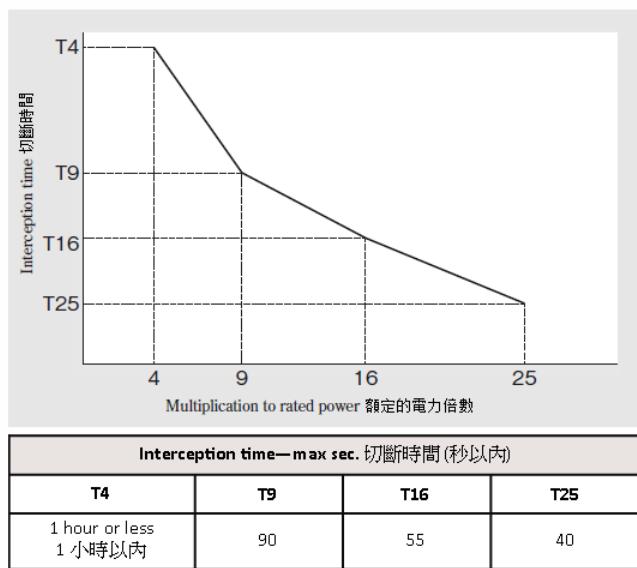
Model Name 型號	Rated power (25°C)	Nominal resistance value (25°C)	Resistance tolerance	Thermal-Links 溫度保險絲				UL C-UL	TUV
				Model Name 型號	Rated functioning temp. (Tf)	Rated voltage 額定電壓	Rated current 額定電流		
F7K□□□J13	3.0W	1.8~820Ω	± 5%	L5F	136°C	AC250V	5A	○	○
F7K□□□J14				L7F	145°C	AC250V	5A	○	○



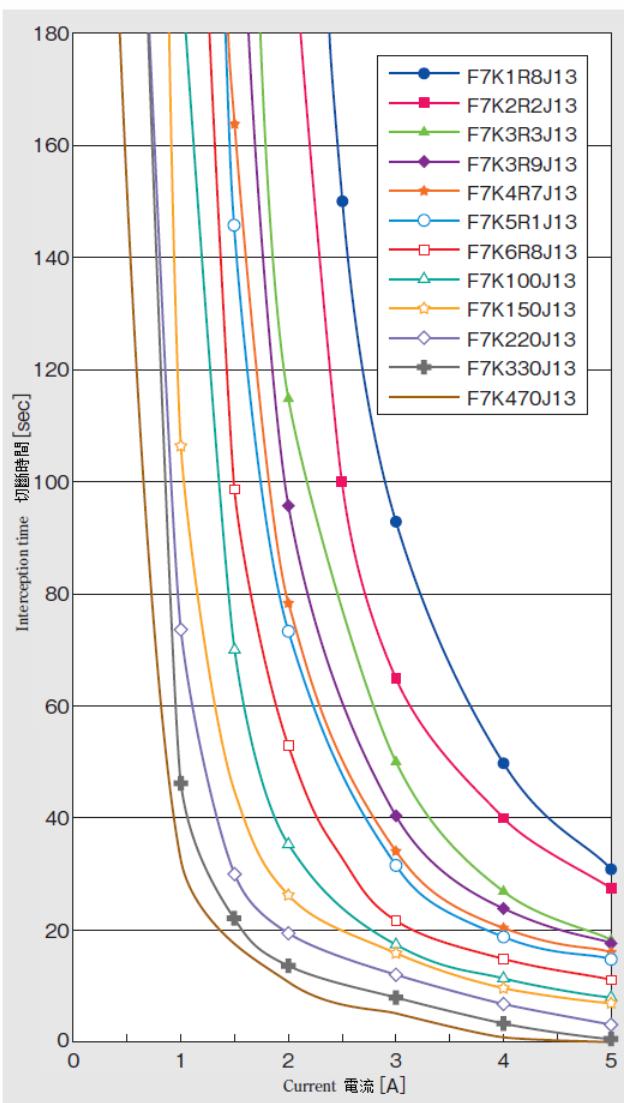
Derating Curve 降低負荷曲線



Interception Time vs. Wattage 切斷性能



Interception Characteristics 切斷特性



## Performance 其他性能

Test Characteristics 切斷時間(秒以內)	Test Methods 試驗方法			Specifications 規格									
Resistance value 電阻值	<p>The following DC voltage is applied across lead terminals for measurements. 導線端子間施加下表的直流電壓進行測定。</p> <table border="1"> <thead> <tr> <th colspan="2">Nominal resistance range 額定電阻值範圍</th> <th>Max. applied Voltage 最高承受電壓</th> </tr> </thead> <tbody> <tr> <td>1 and over 1 以上</td> <td>less than 10 10 未滿</td> <td>0.3</td> </tr> <tr> <td>10 and over 10 以上</td> <td>less than 100 100 未滿</td> <td>1</td> </tr> </tbody> </table>			Nominal resistance range 額定電阻值範圍		Max. applied Voltage 最高承受電壓	1 and over 1 以上	less than 10 10 未滿	0.3	10 and over 10 以上	less than 100 100 未滿	1	Resistance shall be within $\pm 5\%$ of nominal resistance value. 在 $\pm 5\%$ 以內
Nominal resistance range 額定電阻值範圍		Max. applied Voltage 最高承受電壓											
1 and over 1 以上	less than 10 10 未滿	0.3											
10 and over 10 以上	less than 100 100 未滿	1											
Functioning temperature 動作溫度	<p>Soaking the product in the oil bath of temperature rising at 0.5°/per min. Then measure the temperature of oil.</p> <p>The measure beginning temperature is -20°C of rated functioning temperature, and the detection current is assumed to be 10mA or less.</p> <p>製品在每分鐘 0.5°C 的油槽中，製品動作時油槽內溫度的測定。 測定開始定額溫度為 -20°C，檢測電流在 10mA 以下。</p>			F7K□□□J13: 136+0-7°C F7K□□□J14: 145+0-7°C									
Insulation resistance 絕緣電阻	Between body and lead terminals 主體、導線端子間	<p>DC500V is impressed and measured between metallic foil wrapped on the case, and lead terminals.</p> <p>在水泥殼上的金屬箔與導線端子間施加 DC500V 進行測定。</p>											
	Between body lead terminals 兩根導線端子間	<p>DC500V is impressed for and measured between lead terminals after functioning temperature test.</p> <p>動作溫度試驗後，導線端子間施加 DC500V 進行測定。</p>											
Dielectric strength 耐電壓	Between body and lead terminals 主體、導線端子間	<p>AC1.5kV is impressed for 1 minute and measured between metallic foil wrapped on the case, and lead terminals. (Cutoff current 0.5mA)</p> <p>在水泥殼上的金屬箔與導線端子間施加 AC1.5kV 進行 1 分鐘測定。(檢測電流 0.5mA)</p>											
	Between body lead terminals 兩根導線端子間	<p>AC500V is impressed for 1 minute and measured between lead terminals after functioning temperature test. (Cutoff current 0.5mA)</p> <p>動作溫度試驗後，導線端子間施加 AC500V 進行 1 分鐘測定。(檢測電流 0.5mA)</p>											
Temperature coefficient of resistance 電阻溫度系數	Room temperature / 70°C up 室溫 / 70°C 以上			$\pm 250\text{ppm}/^{\circ}\text{C}$									
Short time overload 短時間過負荷	Rated power x 10, for 5 sec. 額定電力 $\times 10$ 倍，承受 5 秒鐘			$\pm(2\%+0.05\Omega)$									
Soldering heatproof 焊接耐熱性	265°C $\pm 5^{\circ}\text{C}$ , 10 sec.			$\pm(1\%+0.05\Omega)$									
Terminal strength 端子強度	<p>Pull: 20N, 1 min. Bending: 90°C, 1 cycle</p> <p>拉力：20N，1 分鐘 扭曲：90°C，1 週期</p>			No mechanical damages 無斷線、鬆動、破損									
Humidity resistance 耐濕性	40°C, Humidity 90~95%RH, 10000 hours 40°C, 濕度 90~95%RH, 10000 小時			$\pm(2\%+0.05\Omega)$									
Load life 負荷壽命特性	Rating load 1000 hours, 1.5 hours ON / 0.5 hours OFF cycle 額定負荷 1000 小時，1.5 小時開/0.5 小時關的週期			$\pm(3\%+0.05\Omega)$									