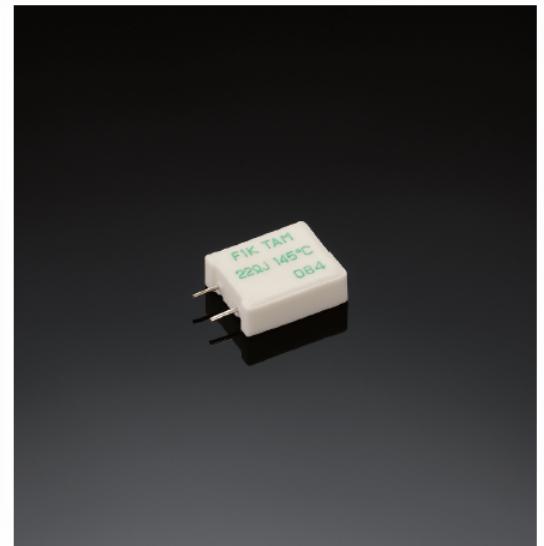


# F1K series Thermal-Links/Resistor Assemblies

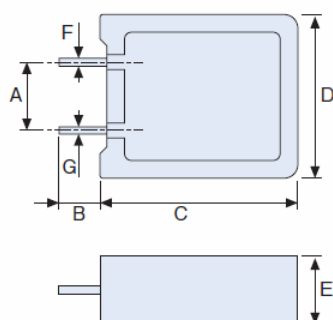
F1K系列 溫度保險絲附電阻器



- Thermal-Links/Resistor Assemblies is a product that combined with thermal-links of fusible alloy type and 1W resistor type.
- F1K is RoHS compliance product, non-Pb and non-Cd contains.
- F1K got excellent interception characteristic when abnormality overload happened.
- It is small with space-saving design and best for protection the power supply adapter.
- 可熔合金型溫度保險絲和 1W 電阻器組合成一體的製品。
- F1K 是不含鉛、鎘的製品。(RoHS 對象製品)
- F1K 能在超負荷等異常時，發揮它的優越切斷特性。
- 因為小型省空間的設計，對電源適配器的保護最適合。



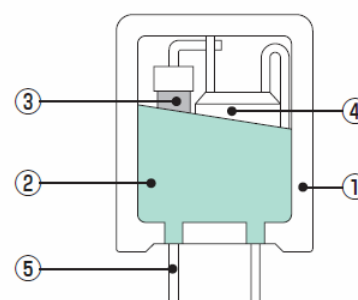
## Dimension 尺寸



Unit : mm

|   |               |
|---|---------------|
| A | 5±0.5         |
| B | 3.5 + 1, -0.5 |
| C | 14.5±0.5      |
| D | 12±0.5        |
| E | 5±0.5         |
| F | 0.58±0.04     |
| G | 0.53±0.04     |

## Construction 構造圖



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

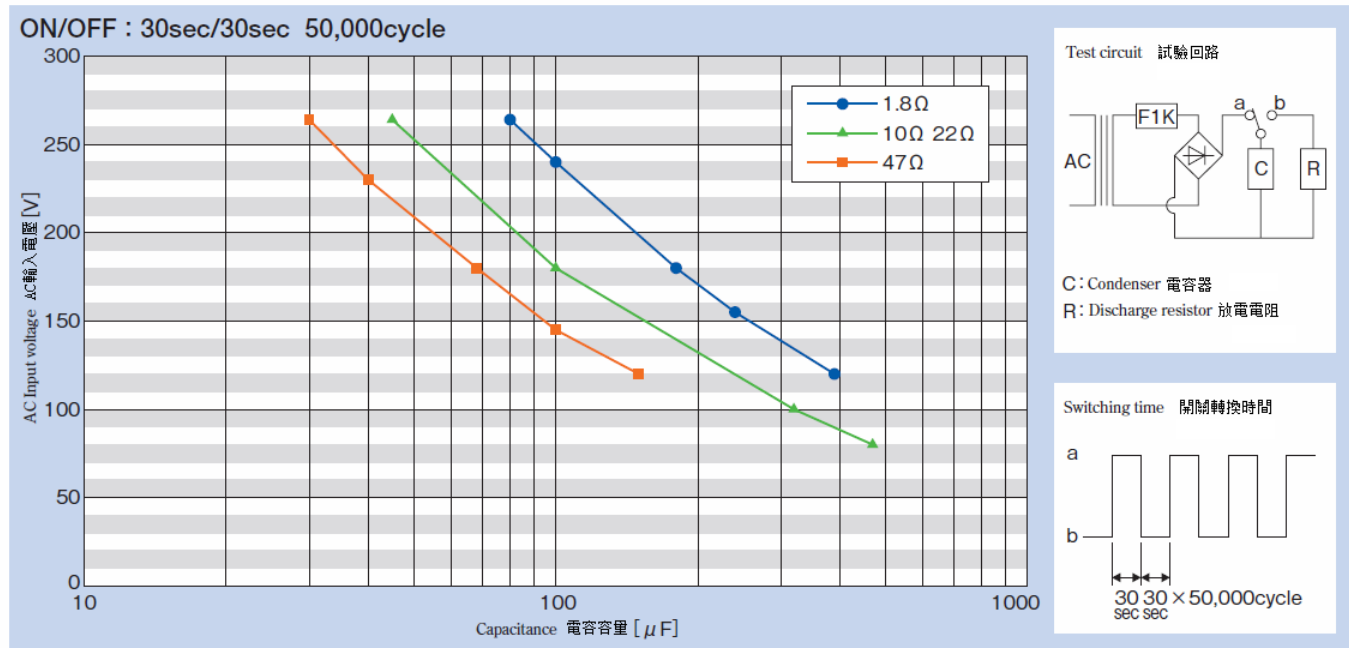
## Models Component 型號構成

**F1K**              **J**   **14**

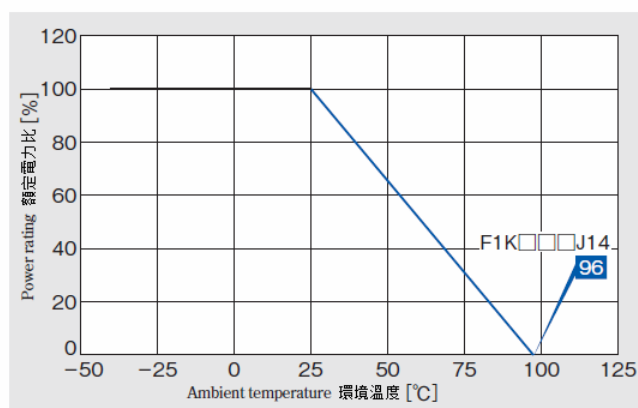
Series 系列名   Nominal resistance value 額定電阻值   Resistance tolerance 電阻值容許偏差 **J: ±5%**   Thermal-Links 溫度保險絲 **14: Tf 145°C**

## Ratings 額定

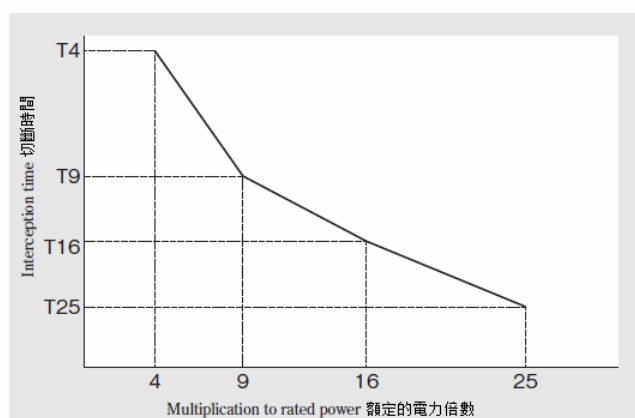
| Model Name<br>型號 | Rated power<br>額定電力<br>(25°C) | Nominal resistance value<br>額定電阻值 | Resistance tolerance<br>電阻值容許偏差 | Thermal-Links 溫度保險絲 |                                        |                       |                       | UL<br>C-UL | TUV |
|------------------|-------------------------------|-----------------------------------|---------------------------------|---------------------|----------------------------------------|-----------------------|-----------------------|------------|-----|
|                  |                               |                                   |                                 | Model Name<br>型號    | Rated functioning temp.<br>額定動作溫度 (Tf) | Rated voltage<br>額定電壓 | Rated current<br>額定電流 |            |     |
| F1K□□□J14        | 1.0W                          | 1.8~47Ω                           | ± 5%                            | N7F                 | 145°C                                  | AC250V                | 1A                    | -          | -   |



## Derating Curve 降低負荷曲線

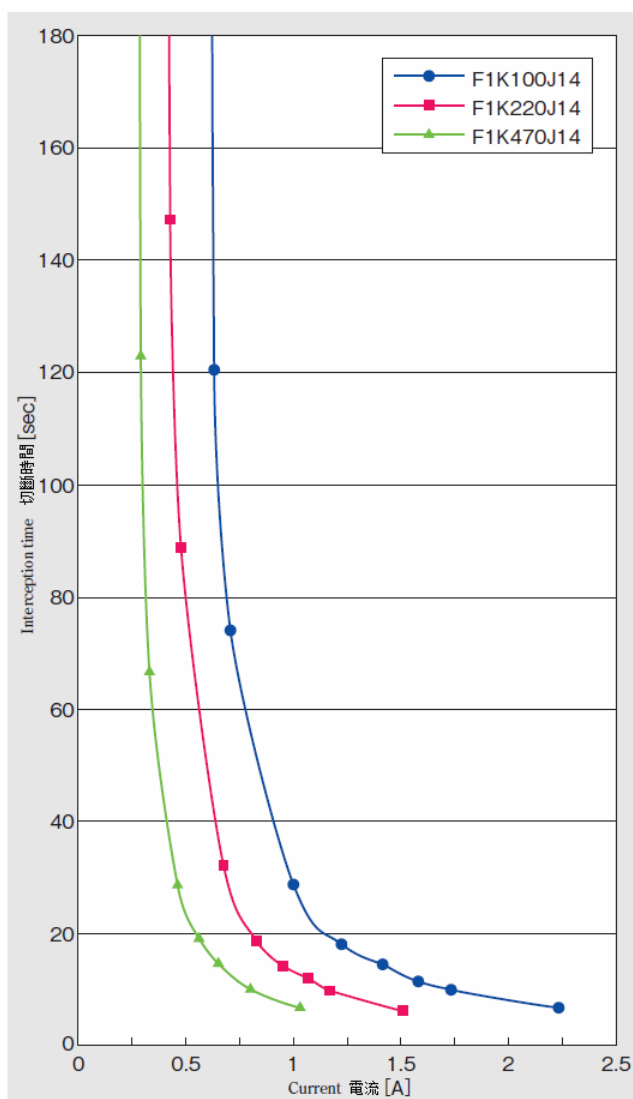


## Interception Time vs. Wattage 切斷性能



| Interception time—max sec. 切斷時間(秒以內) |    |     |     |
|--------------------------------------|----|-----|-----|
| T4                                   | T9 | T16 | T25 |
| 1 hour or less<br>1 小時以內             | 90 | 55  | 40  |

## Interception Characteristics 切斷特性



## Performance 其他性能

| Test Characteristics<br>切斷時間 (秒以內)              | Test Methods<br>試驗方法                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                          | Specifications<br>規格                                                  |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Resistance value<br>電阻值                         | The following DC voltage is applied across lead terminals for measurements.<br>導線端子間施加下表的直流電壓進行測定。                                                                                                                                                                                                                               |                                                                                                                                                                                          | Resistance shall be within ±5% of nominal resistance value.<br>在±5%以內 |
|                                                 |                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                          |                                                                       |
|                                                 |                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                          |                                                                       |
|                                                 |                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                          |                                                                       |
| Functioning temperature<br>動作溫度                 | Soaking the product in the oil bath of temperature rising at 0.5/per min.<br>Then measure the temperature of oil.<br>The measure beginning temperature is -20°C of rated functioning temperature, and the detection current is assumed to be 10mA or less.<br>製品在每分鐘 0.5°C 的油槽中，製品動作時由槽內溫度的測定。<br>測定開始定額溫度為 -20°C，檢測電流在 10mA 以下。 |                                                                                                                                                                                          | F1K□□□J14: 140+0-7°C                                                  |
|                                                 |                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                          |                                                                       |
|                                                 |                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                          |                                                                       |
|                                                 |                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                          |                                                                       |
| Insulation resistance<br>絕緣電阻                   | Between body and lead terminals<br>主體、導線端子間                                                                                                                                                                                                                                                                                      | DC500V is impressed and measured between metallic foil wrapped on the case, and lead terminals.<br>在水泥殼上的金屬箔與導線端子間施加 DC500V 進行測定。                                                        | Insulation resistance shall be 1000MΩ or above.<br>在 1000MΩ以上         |
|                                                 | Between body lead terminals<br>兩根導線端子間                                                                                                                                                                                                                                                                                           | DC500V is impressed for and measured between lead terminals after functioning temperature test.<br>動作溫度試驗後，導線端子間施加 DC500V 進行測定。                                                          | Insulation resistance shall be 0.2MΩ or above.<br>在 0.2MΩ以上           |
| Dielectric strength<br>耐電壓                      | Between body and lead terminals<br>主體、導線端子間                                                                                                                                                                                                                                                                                      | AC1.5kV is impressed for 1 minute and measured between metallic foil wrapped on the case, and lead terminals. (Cutoff current 0.5mA)<br>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) | The products shall withstand for 1 minute.<br>能承受 1 分鐘                |
|                                                 | Between body lead terminals<br>兩根導線端子間                                                                                                                                                                                                                                                                                           | AC500V is impressed for 1 minute and measured between lead terminals after functioning temperature test. (Cutoff current 0.5mA)<br>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)         | The products shall withstand for 1minute.<br>能承受 1 分鐘                 |
| Temperature coefficient of resistance<br>電阻溫度系數 | Room temperature / 70°C up<br>室溫 / 70°C 以上                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                          | ±250ppm/°C                                                            |
| Short time overload<br>短時間過負荷                   | Rated power x 10, for 5 sec.<br>額定電力×10 倍，承受 5 秒鐘                                                                                                                                                                                                                                                                                |                                                                                                                                                                                          | ±(2%+0.05Ω)                                                           |
| Soldering heatproof<br>焊接耐熱性                    | 265°C± 5°C, 10 sec.                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                          | ±(1%+0.05Ω)                                                           |
| Terminal strength<br>端子強度                       | Pull: 20N, 1 min.<br>Bending: 90°C, 1 cycle<br>拉力: 20N，1 分鐘<br>扭曲: 90°C，1 週期                                                                                                                                                                                                                                                     |                                                                                                                                                                                          | No mechanical damages<br>無斷線、鬆動、破損                                    |
| Humidity resistance<br>耐濕性                      | 40°C, Humidity 90~95%RH, 10000 hours<br>40°C，濕度 90~95%RH，10000 小時                                                                                                                                                                                                                                                                |                                                                                                                                                                                          | ±(2%+0.05Ω)                                                           |
| Load life<br>負荷壽命特性                             | Rating load 1000 hours, 1.5 hours ON / 0.5 hours OFF cycle<br>額定負荷 1000 小時，1.5 小時開/0.5 小時關的週期                                                                                                                                                                                                                                    |                                                                                                                                                                                          | ±(3%+0.05Ω)                                                           |