

THERMAL FUSE CEMENT RESISTORS

溫度保險絲水泥電阻器



Features

1. It is suitable for protecting circuit boards.
2. Flameproof construction in a ceramic case, resistant to humidity and insulation.
3. In high resistance value, the winding cores will be replaced by power film cores.
4. Excellent anti-surge characteristics and accurate fusibility.

特色

1. 適用於需要保護的各種電路基板及設計。
2. 不燃性瓷殼結構，具高耐濕及絕緣特性。
3. 高電阻值採用金屬氧化皮膜體代替繞線方式。
4. 絕佳之耐脈衝特性及精確之熔斷效果。

ELECTRICAL AND MECHANICAL PERFORMANCE

電氣及機械特性

特性 Characteristics	規格值 Standards	試驗方法 Test Methods
阻值容許誤差 Resistance Tolerance	$\pm 5\%$ (J)	-
溫度係數 Resistance Temp. Coeff.	± 300 ppm / °C ; < 1Ω : ± 600 ppm/°C	-
額定負載 Power Rating Load	Surface temp. 130°C Max. 最高表面溫度 130°C, $\Delta R/R \leq \pm 2\%$	Rated voltage for 30 minutes 額定電壓 / 30分鐘
短時間過負載 Short Time Overload	$\pm 2\%$	10 times (power film : 5 times) of rated wattage for 5 seconds. 10倍額定功率(皮膜型 : 5倍額定功率)/5秒
耐電壓 Dielectric Withstanding Voltage	No evidence of mechanical damage or insulation breakdown. 無機械性能損壞及絕緣擊穿現象	AC 1000V for 1 minutes 施加 AC 1000V 電壓 1 分鐘
絕緣電阻 Insulation Resistance	1,000MΩ	DC500V megger
端子強度 Terminal Strength	No evidence of mechanical damage. 無機械性能損壞現象	4.5 kg
焊錫性 Solder-ability	Minimum 95% coverage 焊錫面積 $\geq 95\%$	235 \pm 5°C for 2 seconds
浸錫耐熱性 Resistance to Soldering Heat	No evidence of mechanical damage. 無機械性能損壞現象, $\Delta R/R \leq \pm 1\%$	265 \pm 5°C for 10 \pm 1 seconds

ENVIRONMENTAL CHARACTERISTICS

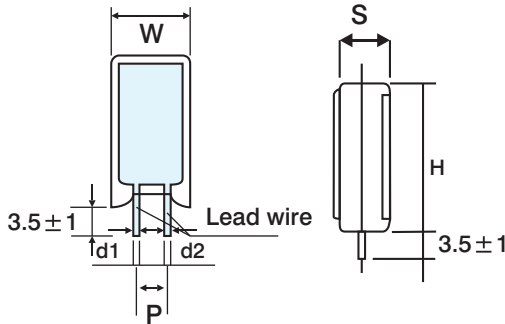
耐環境特性

特性 Characteristics	規格值 Standards	試驗方法 Test Methods
溫度週率 Temp. Cycle	$\Delta R/R \leq \pm 1\%$	-25°C (1 hrs.) → Room Temp. (2 hrs.) → +Operating temp. (1 hrs.) → Room Temp. (2 hrs.) / (5 cycles)
負載壽命 Load Life	$\Delta R/R \leq \pm 5\%$	Rated power load 90 minutes ON 30 minutes OFF 70°C 1000 hours
耐濕壽命 Moisture-proof Load Life	$\Delta R/R \leq \pm 5\%$	Rated power load 90 minutes ON 30 minutes OFF 40°C 95% RH 500 hours
不燃性 Nonflammability	not flamed	16 times of rated wattage for 5 min.

※ 參考規格 Reference Standards
IEC 60115-1
JIS C 5201-1

Dimensions

尺寸



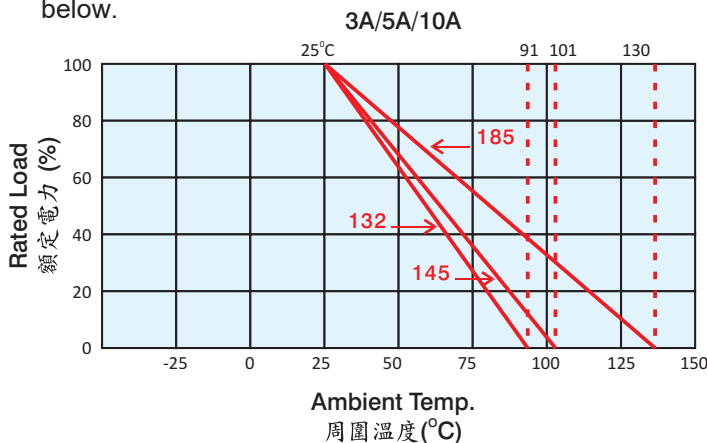
Unit : mm

Rated Wattage	W±1	S±1	H±1.5	P+2/-1	d1±0.1	d2±0.1	Resistance Range (Ω)
SQF3	12	8	25	5	0.8	3A : 0.6 5A : 1.0 10A : 1.0	0.1~50K
SQF5	13	9	25	5	0.8		0.1~50K
SQF7	13	9	39	5	0.8		0.1~50K
SQF10S	16	12	35	7.5	0.8		0.1~50K
SQF10	20Max.	9	25Max.	12.5	0.8	0.8	0.1~50K

Derating Curve

電力輕減曲線

For resistors operated in ambient temperatures above 25°C, power rating must be derated in accordance with the curve below.



Ratings

規格

Rated Current	Rated Functioning Temperature	Rated Wattage				
		SQF3	SQF5	SQF7	SQF10	SQF10S
3A	145°C	1.6W	1.6W	2.2W	3.2W	2.5W
5A	145°C	1.6W	1.6W	2.2W	3.2W	2.5W
10A	132°C	1.6W	1.6W	2.2W	3.2W	2.5W
10A	185°C	2.1W	2.1W	2.4W	4.2W	3.5W

How to order

訂貨方式

It is composed by Type, Nominal Resistance, Tolerance, Rated Functioning Temp., Rated Current and RoHS Compliant. e.g.

SQF5 10R J 145 3A N
a. b. c. d. e. f.

- a. : Type(種類) : Thermal Fuse Cement Resistors upon the rated power. are called "SQF3", "SQF5", "SQF7", "SQF10", "SQF10S".
- b. : Nominal Resistance(公稱電阻值) : 10Ω.
- c. : Tolerance(容許誤差) : J= ±5%
- d. : Rated functioning temp.(額定工作溫度) : 145°C.
- e. : Rated current(額定電流) : 3A.
- f. : RoHS compliant(符合RoHS) .