

CARBON FILM RESISTORS

碳膜電阻器



Features

1. Pure carbonhydric on ceramic cores.
2. Low cost.
3. Good quality and reliability.
4. Provide flameproof type, RDN.

特色

1. 瓷棒著有機化合物之碳。
2. 價格便宜。
3. 良好品質和信賴性佳。
4. 供應不燃性塗裝產品，RDN。

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	±5% (J) or ±2% (G)	-
溫度係數 Resistance Temp. Coeff.	0~-1300 ppm / °C	-55°C ~ 155°C
額定負載 Power Rating Load	Surface temp. 235°C Max. 最高表面溫度 235°C, ΔR/R ≤ ±1%	Rated voltage for 30 minutes 額定電壓 / 30分鐘
短時間過負載 Short Time Overload	±1%	2.5 times of rated voltage for 5 seconds. 2.5 倍額定電壓 / 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	Max. Overload Voltage for 1 min. 施加最高過負載電壓 1 分鐘 (RDN 1 W & 2 W : AC 350V)
絕緣電阻 Insulation Resistance	10,000MΩ	DC 100V or 500V megger
端子強度 Terminal Strength	No evidence of mechanical damage. 無機械性能損壞現象	< 1/4W : 1 kg > 1/2W : 1.5 kg
焊錫性 Solder-ability	Minimum 95% coverage 焊錫面積 ≥ 95%	235 ± 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, ΔR/R ≤ ±1%	270 ± 5°C for 10 ± 1 seconds 350 ± 10°C for 3.5 ± 0.5 seconds

ENVIRONMENTAL CHARACTERISTICS

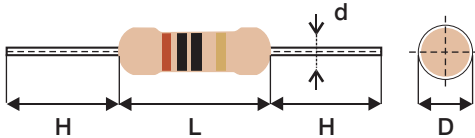
耐環境特性

特性 Characteristics	規格值 Standards	試驗方法 Test Methods
溫度週率 Temp. Cycle	ΔR/R ≤ ±1%	-55°C (30 min.) → Room Temp. (3 min.) → +155°C (30 min.) → Room Temp. (3 min.) / (5 cycles)
負載壽命 Load Life	ΔR/R ≤ ±5%	Rated power load 90 minutes ON 30 minutes OFF 70°C 1000 hours
耐濕壽命 Moisture-proof Load Life	ΔR/R ≤ ±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.

Unit : mm

Dimensions

尺寸



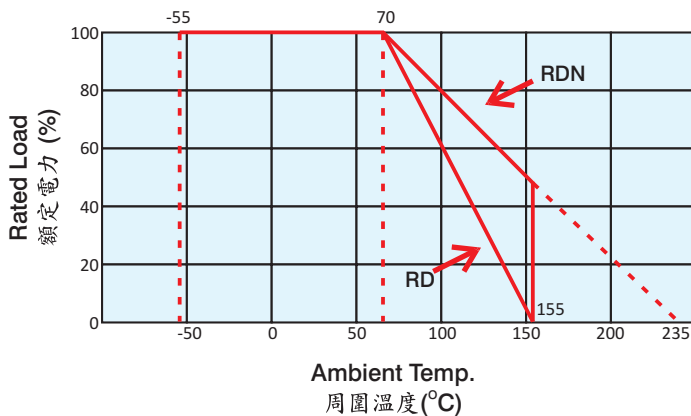
Rated Wattage	D±1	L±1	H±3	d±0.1	Resistance Range(Ω)	Max. Working Voltage
RD 1/8W, 1/6W(1/4WS)	1.7±0.2	3.7Max.	28	0.45	3.9~4.7M	200V
RD 1/4W(1/2WS)	2.4±0.5	6.4	28	0.6	3.9~10M	250V
RD 1/2W	3.5	9	28	0.65	3.9~10M	350V
RDN 1W	4.5	11	28	0.8	3.9~10M	500V
RDN 2W	5.0	15	28	0.8	3.9~10M	750V

- Note:**
- To prevent electric corrosion, the resistance over 100KΩ should be limited at 50V.
 - Too low or too high ohmic values can be supplied only case by case.
 - Max. Overload Voltage is 2 times of Max. Working Voltage.
 - Resistance values over 4.7MΩ (≥4.7MΩ), while RD 1/8W is ≥1MΩ, the tolerance shall be ±10%.
 - RD 1/4W, 1/2W can also be supplied flameproof coating (RDN).

Derating Curve

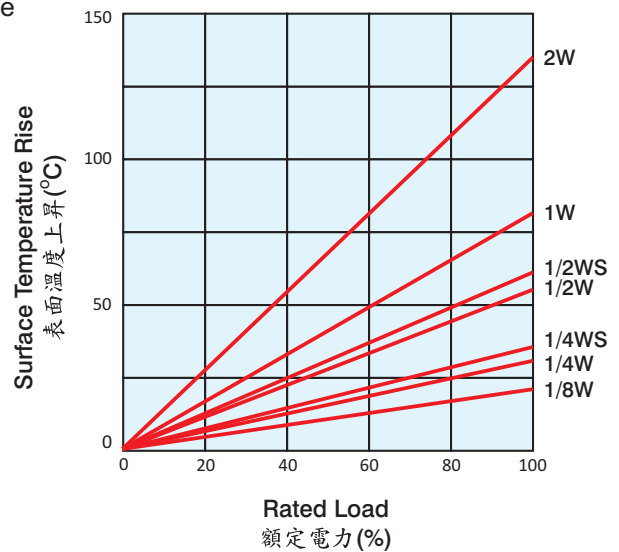
電力輕減曲線

For resistors operated in ambient temperatures above 70°C, power rating must be derated in accordance with the curve below.



Surface Temperature Rise

表面溫度上昇曲線



How to order

訂貨方式

It is composed by Type, Rated Wattage, Nominal Resistance, Tolerance and Package. e.g.

RD 1/4W 10R J T/B
a. b. c. d. e.

- a. : Type(種類): Carbon Film Resistors are called "RD".
b. : Rated Wattage(額定電力) : Shown by "W", such as 1/8W(1/6W,1/4WS), 1/4W(1/2WS),1/2W,1W,2W.
c. : Nominal Resistance(公稱電阻值) : 10Ω.
d. : Tolerance(容許誤差): G = ±2% , J = ±5% .
e. : Package (包裝方式):
T/R=tape & reel (捲裝); T/B=tape in box(帶裝); Nil= Bulk(散裝).