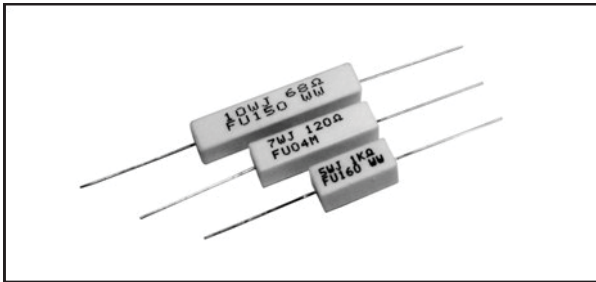


CEMENT RESISTOR

RGW 水泥電阻器
CEMENT RESISTOR (Standard Type)

RGF 水泥電阻器
CEMENT RESISTOR (Small Type)



本體顏色 : Body color
白色 : White
標示 : Marking
文字 : Alphanumeric

特性 Feature

- ◎ 不燃與絕緣之安全設計
- ◎ Compact type with safety design of non-flammability and insulation.
- ◎ 可提供低電感
- ◎ Low inductance is available.
- ◎ 長期穩定性佳
- ◎ Stable long life.
- ◎ 可依客戶需求製作
- ◎ Can be produced according to customer's request.
- ◎ 產品符合歐盟 RoHS 要求
- ◎ Products meet EU-RoHS.

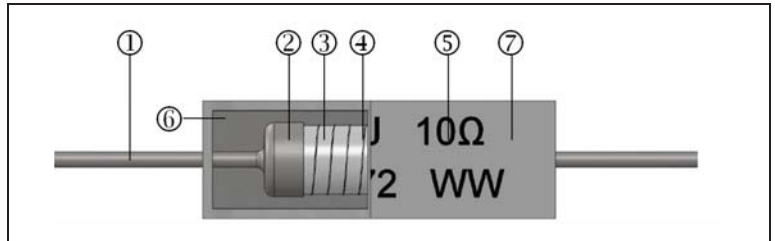
參考規格 Reference standards

- JIS C 5201-1

額定 Ratings

| Rated Power (W) | 阻值範圍 Resistance Range(Ω) | | 最高使用電壓 Max. Working Voltage DC | 最高過負荷電壓 Max. Overload Voltage DC | 耐電壓 Dielectric Withstanding Voltage DC | 溫度係數 T.C.R. |
|-----------------|--------------------------|---------------------------|--------------------------------|----------------------------------|--|--|
| | 皮膜型 Film Type (RGF) | 繞線型 Wire wound Type (RGW) | | | | |
| 1 | 4~39K | 0.1~330 | 150V | 300V | 1000V | ≤ 1Ω: ± 600 ppm/°C > 1Ω: ± 350 ppm/°C |
| 2 | 4~39K | 0.1~330 | 150V | 300V | | |
| 3 | 4~470K | 0.1~330 | 350V | 700V | | |
| 5 | 4~470K | 0.1~2K | 350V | 700V | | |
| 7 | 4~470K | 0.1~2.2K | 500V | 1000V | | |
| 10 | 4~470K | 0.1~4.7K | 750V | 1500V | | |
| 15 | 4~100K | 1~5.1K | 1000V | 1500V | | |
| 20 | 4~100K | 1~10K | 1000V | 1500V | | |
| 25 | 4~100K | 1~10K | 1000V | 1500V | | |
| 30 | 4~100K | 1~10K | 1000V | 1500V | | |
| 40 | 4~100K | 1~10K | 1000V | 1500V | | |

結構圖 Construction



| | | | | | |
|---|-------|-------------------|---|------|-----------------|
| 1 | 端子線 | Lead wire | 5 | 標示 | Marking |
| 2 | 鐵帽 | Cap | | | |
| 3 | 瓷棒 | Ceramic base | 6 | 絕緣塗料 | Insulation coat |
| 4 | 繞線/皮膜 | Wire wound / Film | 7 | 瓷殼 | Ceramic case |

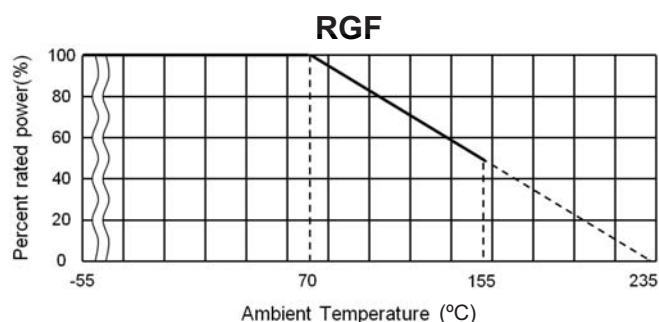
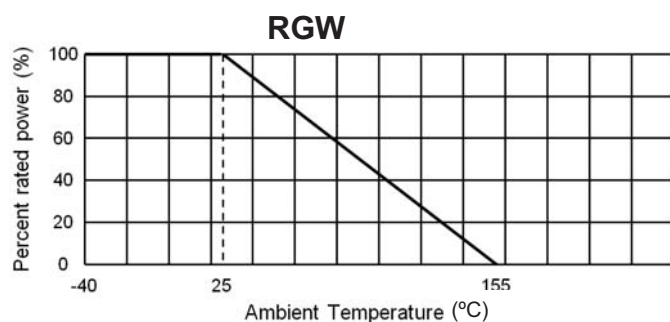
料號編碼 Type composition 例 Example

| RG | W | 01 | J | R100 | PG00 | NH |
|---------|---------|------------------|---------------|-------------------|--------------|---------------|
| 型名 Type | 品名 Size | 額定功率 Rated Power | 誤差值 Tolerance | 電阻值(Ω) Resistance | 二次加工 Forming | 端子線 Lead Wire |
| | W: Wire | 01:1W | F±1% | R100=0.1 | PG00=P Type | NH=Heat |
| | F: Film | 02:2W | G±2% | 1R00=1 | MG00=M Type | Plated |
| | | 05:5W | J±5% | 10R0=10 | SG00=S Type | NL=Electro |
| | | 07:7W | K±10% | 1000=100 | TG00=T Type | Plated |
| | | A0:10W | | 1001=1K | HG00=H Type | |
| | | B5:25W | | 1002=10K | | |

造型對應表 Type matrix

| RG Type | 額定功率 (W) Rated Power(W) | | | | | | | | | | |
|---------|-------------------------|---|---|---|---|----|----|----|----|----|----|
| | 1 | 2 | 3 | 5 | 7 | 10 | 15 | 20 | 25 | 30 | 40 |
| P | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | | |
| Z | | | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | | |
| M | | ◎ | ◎ | ◎ | ◎ | ◎ | | ◎ | | | |
| T | | | | ◎ | ◎ | ◎ | | | | | |
| S | | | | | ◎ | ◎ | | | | | |
| H | | | | | | ◎ | ◎ | ◎ | | ◎ | ◎ |

■ 額定溫度下降曲線圖 Derating curve 例 Example



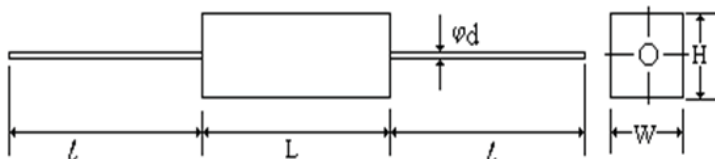
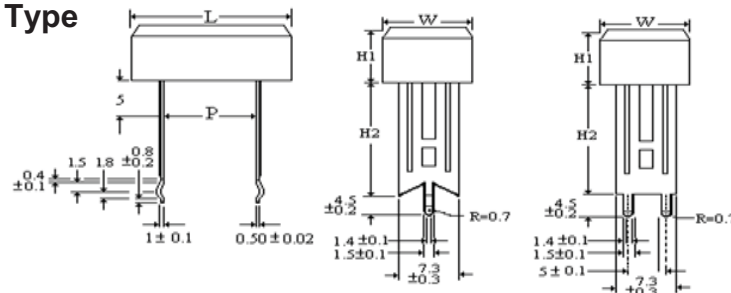
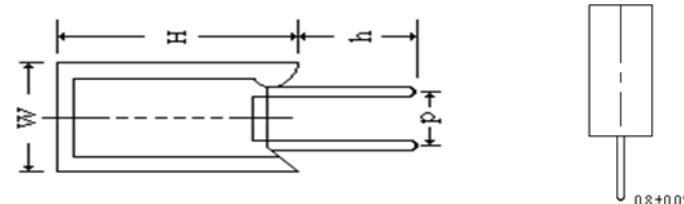
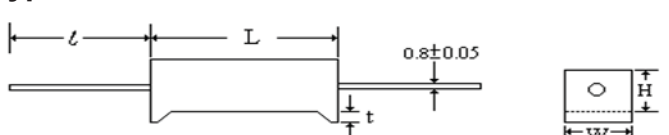
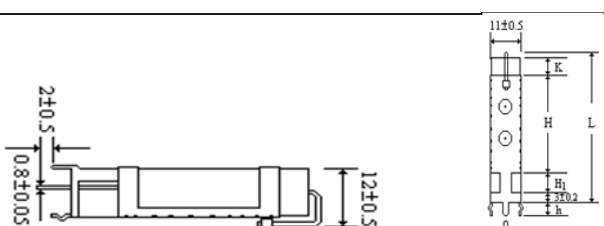
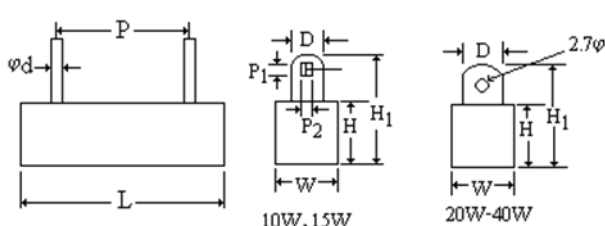
■ 造型圖 (Dimensions see as APPENDIX)

| | |
|----------------------|----------------------|
| <p>P Type</p> | <p>Z Type</p> |
| <p>M Type</p> | <p>S Type</p> |
| <p>T Type</p> | <p>H Type</p> |

■ 性能 Performance

| 試驗項目 Test Items | 規格值 Performance Requirements | 試驗方法 Test Methods |
|--------------------------------------|---------------------------------------|---|
| 電阻值 Resistance | 規定的誤差值內 Within specified tolerance | 測量點從端蓋 10 mm Measuring points are 10 mm from the end cap |
| 溫度係數 T.C.R. | 規定值內 Within specified T.C.R. | 室溫+100°C Room temperature +100°C |
| 短時間過負荷 Short time overload | ±(1%+0.05Ω) | RGW: 10 倍額定功率 · 5 秒 10 times the rated power for 5 seconds RGF : 6.25 倍額定功率 · 5 秒 6.25 times the rated power for 5 seconds |
| 負荷壽命 Load life | ±(5%+0.1Ω) | Rated voltage at 70°C for 1,000 hours 1.5hr ON / 0.5hr OFF Cycles |
| 耐濕負荷壽命 Load life in humidity | ±(5%+0.1Ω) | 10% rate power load 40°C, 95% RH for 1,000 hours; 1.5h ON / 0.5h OFF cycle |
| 溫度循環 Temperature cycle | ±(1%+0.05Ω) | 5 cycles for -25°C (30min) ; room temp. (30min) ~ +85°C (30min) room temp. (30min) |
| 焊錫耐熱 Resistance to soldering heat | ±(1%+0.05Ω) | 260°C ± 5 ° C for 10 seconds (焊錫槽) 350°C ± 10 ° C for 3.5 seconds (手焊錫) |
| 絕緣電阻 Insulation resistance | >1000MΩ | 500V 絕緣測試 1 分鐘 500V insulation test 1min. |

APPENDIX (RG series Type Forming)

| Forming Style | Rated Power (W) | Dimensions (mm) | | | | | | | |
|--|--|-----------------|--------|--------|---------|----------|---------|---------|---------|
| | | L | W | H | t | Ød | | | |
| P Type  | 1 | 14±1 | 6.5±1 | 6.5±1 | 21±3 | 0.6±0.05 | | | |
| | 2 | 18±1 | 7±1 | 7±1 | 21±3 | 0.8±0.05 | | | |
| | 3 | 22±1.5 | 8±1 | 8±1 | 30±3 | 0.8±0.05 | | | |
| | 5 | 22±1.5 | 10±1 | 9±1 | 33±3 | 0.8±0.05 | | | |
| | 7 | 35±1.5 | 10±1 | 9±1 | 33±3 | 0.8±0.05 | | | |
| | 10 | 48±1.5 | 10±1 | 9±1 | 30±3 | 0.8±0.05 | | | |
| | 15 | 48±1.5 | 12.5±1 | 11.5±1 | 30±3 | 0.8±0.05 | | | |
| | 20~25 | 60±2 | 14±1 | 13.5±1 | 33±3 | 0.8±0.05 | | | |
| | Z Type  | Rated Power (W) | W | L | H1 | H2 | P | | |
| 3 | | 10±1 | 25±1.5 | 10±1 | 10.5±1 | 9±1.5 | | | |
| 5 | | 10±1 | 28±1.5 | 10±1 | 10.5±1 | 15±1.5 | | | |
| 7 | | 10±1 | 36±1.5 | 10±1 | 10.5±1 | 20±1.5 | | | |
| 10 | | 10±1 | 48±1.5 | 10±1 | 10.5±1 | 32±1.5 | | | |
| 15 | | 12.5±1 | 48±1.5 | 12±1 | 16.5±1 | 32±1.5 | | | |
| 20~25 | | 12.5±1 | 62.5±1 | 13±1 | 15±1 | 42±1.5 | | | |
| M Type  | | Rated Power (W) | P | W | H | h | S | | |
| | 2 | 5±1 | 11±1 | 20±1.5 | 3.5±1 | 7±1 | | | |
| | 3 | 5±1 | 12±1 | 25±1.5 | 3.5±1 | 8±1 | | | |
| | 5 | 5±1 | 13±1 | 25±1.5 | 3.5±1 | 9±1 | | | |
| | 7 | 5±1 | 13±1 | 39±1.5 | 3.5±1 | 9±1 | | | |
| | 10 | 5±1 | 13±1 | 51±1.5 | 3.5±1 | 9±1 | | | |
| | 10S | 7.5±1 | 16±1 | 35±1.5 | 3.5±1 | 12±1 | | | |
| | 20 | 8±1 | 20±1 | 45±1.5 | 3.5±1 | 13±1 | | | |
| T Type  | Rated Power (W) | L | W | H | l | t | | | |
| | 5 | 22±1.5 | 10±1 | 9±1 | 33±3 | 1.5±0.5 | | | |
| | 7 | 35±1.5 | 10±1 | 9±1 | 33±3 | 3.0±0.5 | | | |
| | 10 | 48±1.5 | 10±1 | 9±1 | 30±3 | 3.0±0.5 | | | |
| S Type  | Rated Power (W) | L | H | H1 | K | h | | | |
| | 7 | 46±1.5 | 28±0.5 | 7±0.5 | 6.5±0.5 | 4±0.3 | | | |
| 10 | 60±1.5 | 28±0.5 | 7±0.5 | 20±0.5 | 4±0.3 | | | | |
| H Type  | Rated Power (W) | W | H | L | P | H1 | D | P1 | P2 |
| | 10 | 10±1 | 10±1 | 48±1.5 | 32±1 | 18±1 | 5±0.5 | 2.5±0.2 | 1.7±0.2 |
| | 15 | 12.5±1 | 11.5±1 | 48±1.5 | 32±1 | 21±1 | 6±0.5 | 2.5±0.2 | 1.7±0.2 |
| | 20 | 12.5±1 | 12.5±1 | 62±1.5 | 42±1 | 22±1 | 6±0.5 | 3±0.2 | 2.5±0.2 |
| | 30 | 19±1 | 19±1 | 75±1.5 | 55±2 | 31±1 | 7.5±0.5 | ----- | ----- |
| 40 | 19±1 | 19±1 | 90±1.5 | 69±2 | 31±1 | 7.5±0.5 | ----- | ----- | |