

AXIAL LEAD TYPE

Standard Type[SQP Series], Non-Inductive Type[NSP Series]



INTRODUCTION

- The materials used and the construction techniques ensure excellent flame resistance, arc resistance and moisture resistances as well as self-extinguishing capabilities. They will withstand the most rigorous loading test
- As resistors in radio and television receivers, the hazardous conditions of smoking and redheat can be completely prevented by the proper choice of power resistors

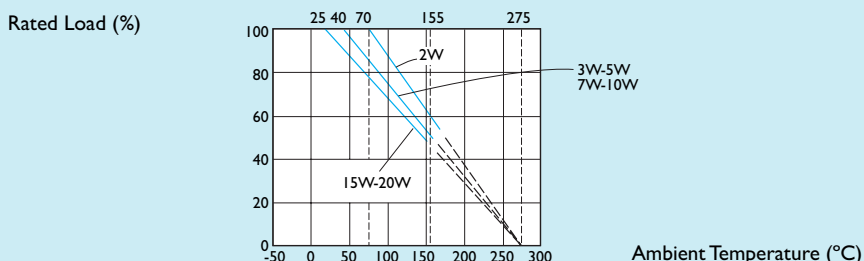
FEATURES

Exceptionally Small and Sturdy; Mechanically Safe. Excellent Electrical Characteristics

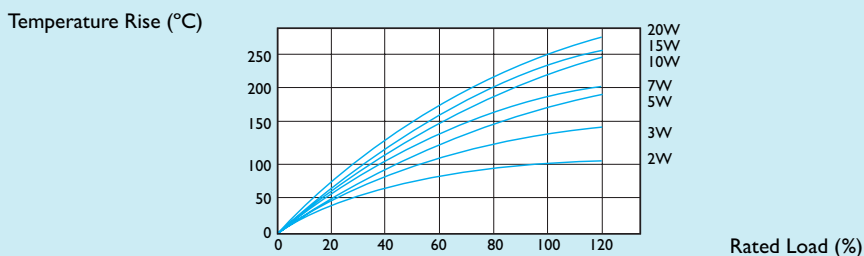
Resistance Tolerance: $\pm 5\%$

Applicable Specifications: EIA RS-344 and EIA RC-649

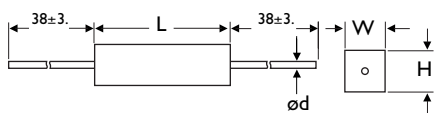
DERATING CURVE



TEMPERATURE RISE



DIMENSIONS



Unit : mm

| STYLE | L | W | H | ød |
|--------|--------------|----------------|----------------|----------------|
| SQP200 | 18 \pm 1.0 | 6.5 \pm 1.0 | 6.5 \pm 1.0 | 0.8 \pm 0.05 |
| SQP300 | 22 \pm 1.5 | 8.0 \pm 1.0 | 8.0 \pm 1.0 | 0.8 \pm 0.05 |
| SQP500 | 22 \pm 1.5 | 9.5 \pm 1.0 | 9.0 \pm 1.0 | 0.8 \pm 0.05 |
| SQP700 | 35 \pm 1.5 | 9.5 \pm 1.0 | 9.0 \pm 1.0 | 0.8 \pm 0.05 |
| SQP10A | 48 \pm 1.5 | 9.5 \pm 1.0 | 9.0 \pm 1.0 | 0.8 \pm 0.05 |
| SQP15A | 48 \pm 1.5 | 12.5 \pm 1.5 | 12.5 \pm 1.5 | 1.0 \pm 0.05 |
| SQP20A | 60 \pm 2.0 | 12.5 \pm 1.5 | 12.5 \pm 1.5 | 1.0 \pm 0.05 |



Note :

ELECTRICAL CHARACTERISTICS

| STYLE | SQP200 | SQP300 | SQP500 | SQP700 | SQP10A | SQP15A | SQP20A |
|--|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------|--------|
| Power Rating | 2W | 3W | 5W | 7W | 10W | 15W | 20W |
| Operating Temp. Range | -55°C to +155°C | | | | | | |
| Maximum Working Voltage | 250V | 350V | 350V | 500V | 500V | 500V | 500V |
| Maximum Overload Voltage | 500V | 700V | 700V | 1000V | 1000V | 1000V | 1000V |
| Dielectric Withstanding Voltage | 500V | 700V | 700V | 1000V | 1000V | 1000V | 1000V |
| Value Range $\pm 5\%$ (Wirewound) | 0.15 Ω ~100 Ω | 0.3 Ω ~120 Ω | 0.3 Ω ~180 Ω | 0.5 Ω ~220 Ω | 1 Ω ~270 Ω | | |
| Value Range $\pm 5\%$ (Metal Oxide Film) | 110 Ω ~10K Ω | 130 Ω ~22K Ω | 200 Ω ~33K Ω | 240 Ω ~10K Ω | 300 Ω ~10K Ω | | |
| Temperature Coefficient | ± 300 ppm/°C | | | | | | |

* 1. Standard resistance is as the above list, below or over this resistance on request.

* 2. Non-Inductive type up to 50 Ω only.

ENVIRONMENTAL CHARACTERISTICS

| PERFORMANCE TEST | TEST METHOD | APPRAISE | |
|---------------------------------------|--|---|---|
| Short Time Overload | JIS-C-5202 5.5 | 2.5 Times RCWV for 5 Seconds | $\pm (2\%+0.05\Omega)$ |
| Dielectric Withstanding Voltage | JIS-C-5202 5.7 | in V-Block for 60 Seconds | by Type |
| Temperature Coefficient of Resistance | JIS-C-5202 5.2 | -55°C to +155°C | ± 300 ppm/°C |
| Insulation Resistance | JIS-C-5202 5.6 | in V-Block | >100M Ω |
| Solderability | JIS-C-5202 6.5 | 235°C for 5 \pm 0.5 Seconds | 95% Min. Coverage |
| Resistance to Solvent | JIS-C-5202 6.9 | Trichroethane for 1 Min. with Ultrasonic | No Deterioration of Coatings and Markings |
| Terminal Strength | Direct Load for 10 Sec. in The Direction of The Terminal Leads | | ≥ 2.5 kg (24.5N) |
| Pulse Overload | JIS-C-5202 5.8 | 4 Times RCWV 10000 Cycles (1 Sec. on , 25 Sec. off) | $\pm (2\%+0.05\Omega)$ |
| Load Life in Humidity | JIS-C-5202 7.9 | 40 \pm 2°C, 90~95% RH at RCWV for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off) | $\pm (5\%+0.05\Omega)$ |
| Load Life | JIS-C-5202 7.10 | 70°C at RCWV for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off) | $\pm (5\%+0.05\Omega)$ |
| Temperature Cycling | JIS-C-5202 7.4 | -55°C \rightarrow Room Temp. \rightarrow +155°C \rightarrow Room Temp. for 5 Cycles | $\pm (2\%+0.05\Omega)$ |
| Resistance to Soldering Heat | JIS-C-5202 6.4 | 350°C \pm 10°C for 3 \pm 0.5 Seconds | $\pm (1\%+0.05\Omega)$ |

* Rated Continuous Working Voltage (RCWV) = $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$