

Cement Resistors

# CLAMP MOUNTING TYPE

Standard Style [SQH Series]

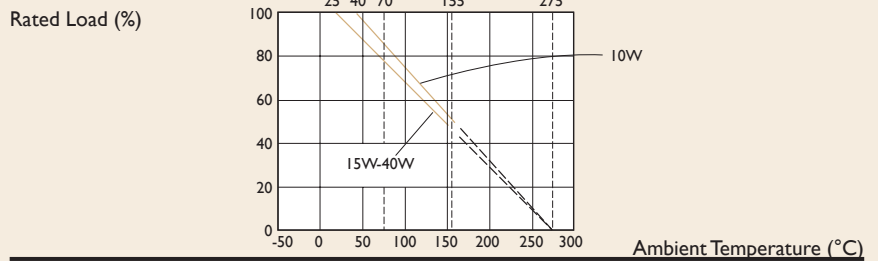
Non-Inductive Style [NSH Series]



## FEATURES

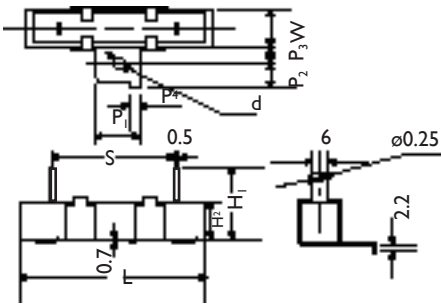
- Low Cost
- Small Size, High Power Capacity
- Resistance Tolerance:  $\pm 5\%$ ,  $\pm 10\%$
- Completely Unflamable

## DERATING CURVE

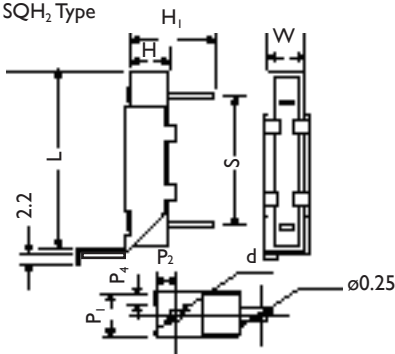


## DIMENSIONS

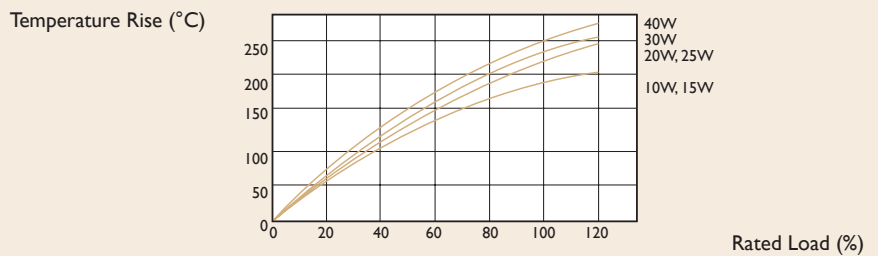
SQH<sub>1</sub> Type



SQH<sub>2</sub> Type



## TEMPERATURE RISE



Unit : mm

| STYLE  |          | DIMENSION |          |        |        |                |                |                |                |                |                |
|--------|----------|-----------|----------|--------|--------|----------------|----------------|----------------|----------------|----------------|----------------|
| STD    | Non-Ind. | L         | H        | W      | S      | H <sub>1</sub> | H <sub>2</sub> | P <sub>1</sub> | P <sub>2</sub> | P <sub>3</sub> | P <sub>4</sub> |
| SQH10A | NSH10A   | 48.0±1.5  | 10.5±1.0 | 10.5±1 | 33.0±2 | 19.5±1.0       | 4.0            | 11.0±0.2       | 6.0            | 8.0            | 3.0            |
| SQH15A | NSH15A   | 48.0±1.5  | 12.5±1.0 | 12.0±1 | 33.0±2 | 20.5±1.0       | 4.0            | 11.0±0.2       | 6.0            | 8.0            | 3.0            |
| SQH20A | NSH20A   | 63.5±2.0  | 12.5±1.0 | 12.5±1 | 48.0±2 | 20.5±1.0       | 4.0            | 11.0±0.2       | 6.0            | 8.0            | 3.0            |
| SQH25A | NSH25A   | 63.5±2.0  | 16.0±1.0 | 16.0±1 | 46.0±2 | 28.0±1.5       | 4.2            | 11.0±0.2       | 6.0            | 10.0           | 3.0            |
| SQH30A | NSH30A   | 75.0±2.0  | 19.0±1.5 | 18.0±1 | 56.0±2 | 28.0±1.5       | 4.2            | 18.0±0.2       | 8.0            | 10.0           | 3.0            |
| SQH40A | NSH40A   | 90.0±2.5  | 19.0±1.5 | 18.0±1 | 71.0±2 | 28.0±1.5       | 4.2            | 18.0±0.2       | 8.0            | 10.0           | 3.0            |



Note :

## ELECTRICAL CHARACTERISTICS

| STYLE                              | SQH10A          | SQH15A     | SQH20A     | SQH25A    | SQH30A    | SQH40A    |
|------------------------------------|-----------------|------------|------------|-----------|-----------|-----------|
| Power Rating                       | 10W             | 15W        | 20W        | 25W       | 30W       | 40W       |
| Operating Temp. Range              | -55°C to +155°C |            |            |           |           |           |
| Maximum Working Voltage            | 250V            | 350V       | 500V       | 500V      | 500V      | 500V      |
| Maximum Overload Voltage           | 500V            | 700V       | 1000V      | 1000V     | 1000V     | 1000V     |
| Dielectric Withstanding Voltage    | 1000V           | 1000V      | 1000V      | 1000V     | 1000V     | 1000V     |
| Value Range ±5% (Ceramic Core)     | 0.39Ω~270Ω      | 0.39Ω~300Ω | 0.51Ω~300Ω | 0.51Ω~1KΩ | 0.62Ω~1KΩ | 0.62Ω~1KΩ |
| Value Range ±5% (Metal Oxide Film) | 300Ω~10KΩ       | 330Ω~10KΩ  |            |           |           |           |
| Temperature Coefficient            | ±300ppm/°C      |            |            |           |           |           |

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

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

## ENVIRONMENTAL CHARACTERISTICS

| PERFORMANCE TEST                      | TEST METHOD  |   | APPRAISE                                  |
|---------------------------------------|--|---|---|
| Short Time Overload                   | JIS-C-5202 5.5   | 2.5 Times RCWV for 5 Seconds  | ±(2%+0.05Ω)                               |
| 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   | ±300ppm/°C                                |
| Insulation Resistance                 | JIS-C-5202 5.6   | in V-Block  | >100MΩ                                    |
| Solderability                         | JIS-C-5202 6.5   | 235±5°C for 5±0.5 Seconds   | 95% Min. Coverage                         |
| Resistance to Solvent                 | JIS-C-5202 6.9   | IPA 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 |   | ≥2.5kg (24.5N)                            |
| Pulse Overload                        | JIS-C-5202 5.8   | 4 Times RCWV 10000 Cycles (1 Sec. on , 25 Sec. off)                   | ±(2%+0.05Ω)                               |
| Load Life in Humidity                 | JIS-C-5202 7.9   | 40±2°C, 90~95% RH at RCWV for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off ) | ±(5%+0.05Ω)                               |
| Load Life                             | JIS-C-5202 7.10  | 70°C at RCWV for 1000 Hrs. (1.5 Hrs. on , 0.5 Hrs. off)               | ±(5%+0.05Ω)                               |
| Temperature Cycling                   | JIS-C-5202 7.4   | -55°C→Room Temp.→+155°C→Room Temp. for 5 Cycles                       | ±(2%+0.05Ω)                               |
| Resistance to Soldering Heat          | JIS-C-5202 6.4   | 350°C±10°C for 3±0.5 Seconds  | ±(1%+0.05Ω)                               |

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