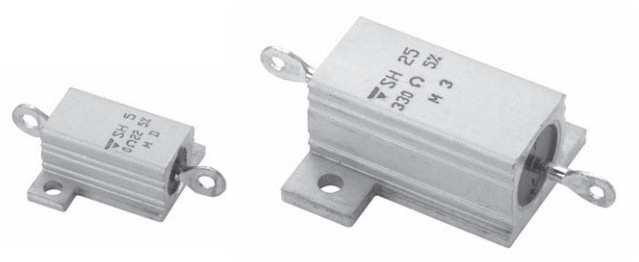
# Heatsink Encased Wirewound Power Resistors Industrial Applications



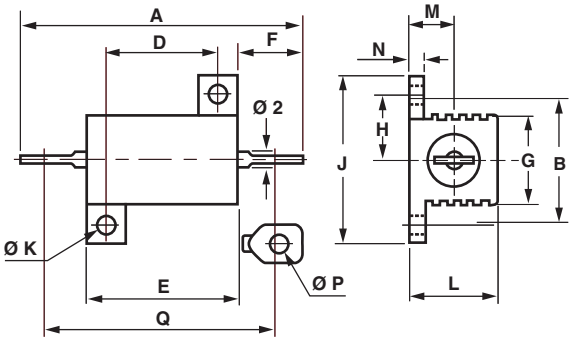
## FEATURES

- ≤ 50 W at + 25 °C
- High power characteristics
- Utilize heatsink capability
- Good mechanical protection
- Industrialized product
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

Built for high power dissipation applications, these components have very good overall characteristics for industrial use under harsh environmental conditions.

## DIMENSIONS in millimeters




| SERIES | A | B ± 0.2 | D ± 0.2 | E ± 0.5 | F | G ± 1 | H ± 0.7 | J ± 0.5 | Ø K ± 0.1 | L MAX. | M ± 0.5 | N ± 0.3 | Ø P MIN. | Q | WEIGHT g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SH5 | 28.5 ± 1.5 | 12.5 | 11.3 | 16.3 | 6.8 ± 1.5 | 8.5 | 6.2 | 16.4 | 2.4 | 8.9 | 4.3 | 1.6 | 2.1 | 25.3 ± 1.5 | 3 |
| SH10 | 35.5 ± 1.5 | 15.9 | 14 | 19 | 7.9 ± 1.5 | 11 | 7.9 | 20.6 | 2.4 | 11 | 5.6 | 2 | 2.1 | 30.6 ± 1.5 | 8.8 |
| SH25 | 49 ± 1.3 | 19.8 | 18.3 | 28 | 11.1 ± 1.5 | 14 | 9.9 | 27.5 | 3.2 | 15 | 8 | 2.4 | 2.1 | 44.6 ± 1.3 | 16.5 |
| SH50 | 70.2 ± 1.4 | 21.4 | 39.7 | 50 | 11 ± 1.2 | 15.5 | 10.7 | 29.4 | 3.2 | 15 | 8 | 2.4 | 2.1 | 66.5 ± 1.4 | 30.8 |

## STANDARD ELECTRICAL SPECIFICATIONS

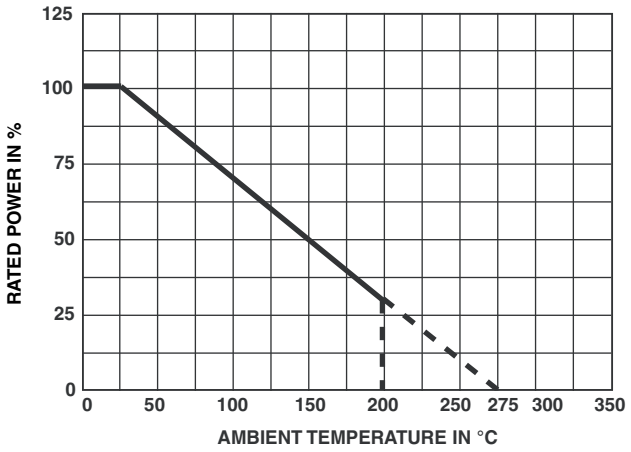
| MODEL | RESISTANCE RANGE Ω | RATED POWER $P_{25\,°C}$ W | LIMITING ELEMENT VOLTAGE V | TOLERANCE ± % |
|---|---|---|---|---|
| SH5 | 0.1 to 3.3K | 10 | 160 | 5 |
| SH10 | 0.1 to 15K | 12.5 | 250 | 5 |
| SH25 | 0.1 to 33K | 25 | 550 | 5 |
| SH50 | 0.1 to 51K | 50 | 1285 | 5 |

## TECHNICAL SPECIFICATIONS

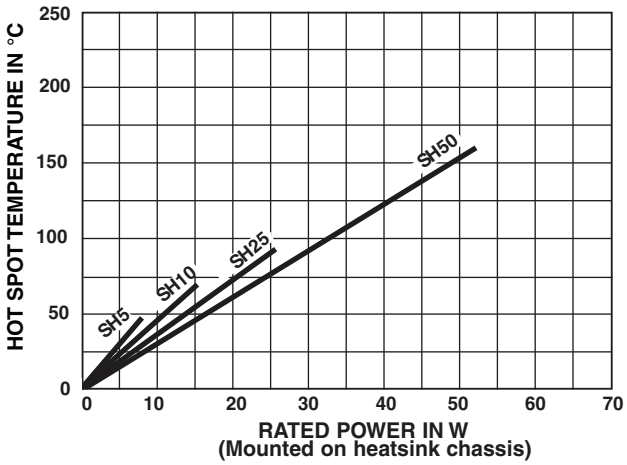
| VISHAY SFERNICE SERIES | | SH5 | SH10 | SH25 | SH50 |
|---|---|---|---|---|---|
| Power Rating Chassis mounted resistors: 413 $cm^2$ for SH5 and SH10, 536 $cm^2$ for SH25 and SH50 | at 25 °C | 10 W | 12.5 W | 25 W | 50 W |
| | at 70 °C | 8 W | 10 W | 20 W | 40 W |
| Unmounted resistors | at 25 °C | 4 W | 6 W | 9 W | 12 W |
| | at 70 °C | 3.2 W | 4.8 W | 7.2 W | 9.6 W |
| Dielectric Strength $V_{RMS}$ | | 800 V | 1000 V | 2000 V | 2000 V |
| Insulation Resistance | | > $10^4$ MΩ | | > 3 x $10^4$ MΩ | |
| Temperature Coefficient | | ± 50 ppm/°C | | $R_n$ > 50 Ω | |
| Climatic Category | | 55/200/56 | | | |
| Temperature Limits | | - 55 °C | | + 200 °C | |

| PERFORMANCE | | |
|---|---|---|
| **TESTS** | **CONDITIONS** | **TYPICAL DRIFTS** |
| Momentary Overload | 5 $P_n$/5 s | ± 0.5 % max. + 0.05 Ω |
| Climatic Sequence | - 55 °C + 200 °C<br>5 cycles | ± 1 % max. + 0.05 Ω |
| Load Life | Nominal power $P_n$<br>1000 h at 25 °C | ± 1 % max. + 0.05 Ω |

## POWER RATING




## TEMPERATURE RISE




## MARKING

Vishay Sfernice trademark, model, style, nominal resistance (in Ω), tolerance (in %), manufacturing date.

| PACKAGING |
|---|
| Bag of 10 units |

| ORDERING INFORMATION | | | | | |
|---|---|---|---|---|---|
| **SH** | **25** | **10 kΩ** | **5 %** | **BA10** | **e1** |
| MODEL | STYLE | OHMIC VALUE | TOLERANCE | PACKAGING | LEAD (Pb)-FREE |

| SAP PART NUMBERING GUIDELINES | | | | |
|---|---|---|---|---|
| **SH** | **25** | **10001** | **J** | **S03** |
| MODEL | STYLE | OHMIC VALUE | TOLERANCE | PACKAGING |

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