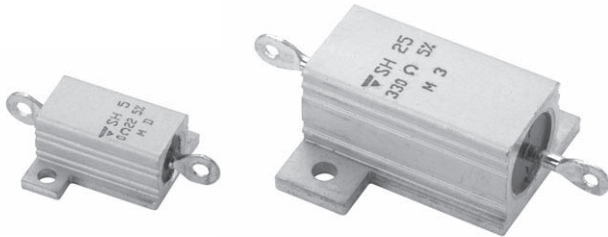


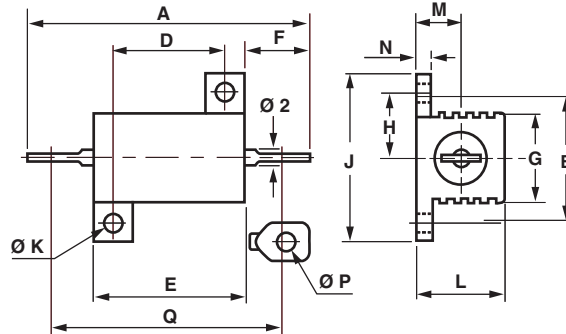
## Heatsink Encased Wirewound Power Resistors Industrial Applications


**FEATURES**

- $\leq 50$  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](http://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 $\Omega$ | RATED POWER $P_{25^\circ\text{C}}$ 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             |

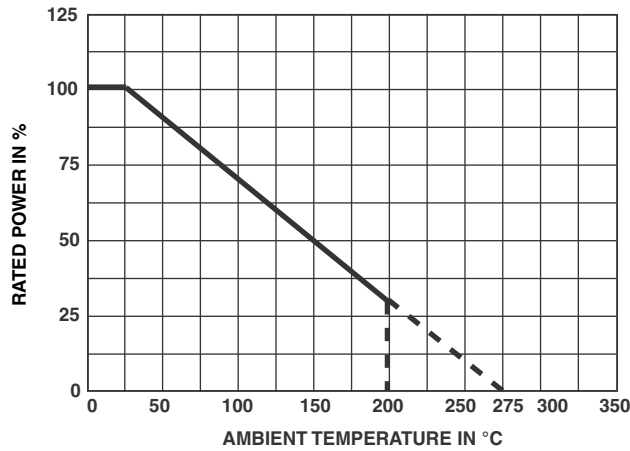
**TECHNICAL SPECIFICATIONS**

| VISHAY SFERNICE SERIES  | SH5                               | SH10   | SH25                         | SH50   |       |
|---|-----------------------------------|--------|------------------------------|--------|-------|
| Power Rating  | at 25 °C                          | 10 W   | 12.5 W                       | 25 W   | 50 W  |
| Chassis mounted resistors:<br>413 cm <sup>2</sup> for SH5 and SH10, 536 cm <sup>2</sup> for SH25 and SH50 | 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 $V_{\text{RMS}}$  | 800 V                             | 1000 V | 2000 V                       | 2000 V |       |
| Insulation Resistance   | $> 10^4$ M $\Omega$               |        | $> 3 \times 10^4$ M $\Omega$ |        |       |
| Temperature Coefficient   | $\pm 50$ ppm/°C $R_n > 50 \Omega$ |        |                              |        |       |
| Climatic Category   | 55/200/56                         |        |                              |        |       |
| Temperature Limits  | - 55 °C + 200 °C                  |        |                              |        |       |

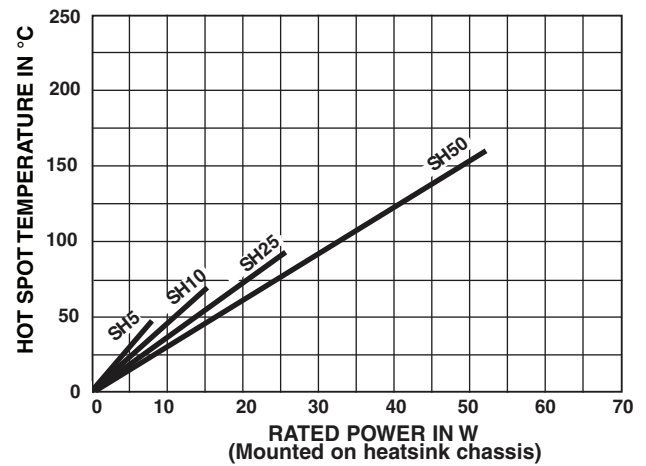


| PERFORMANCE        |  |                       |
|--------------------|--|-----------------------|
| TESTS              | CONDITIONS                             | TYPICAL DRIFTS        |
| Momentary Overload | 5 $P_n$ /5 s                           | ± 0.5 % max. + 0.05 Ω |
| Climatic Sequence  | - 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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