## Vishay Sfernice



# **Heatsink Encased Wirewound Power Resistors Industrial Applications**



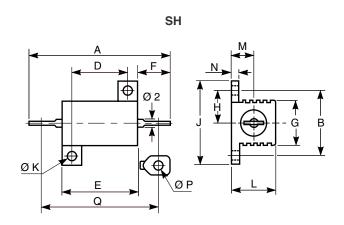
#### **FEATURES**

- ≤ 50 Watt at + 25 °C
- High power characteristics
- · Utilize heatsink capability
- Good mechanical protection
- · Industrialized product



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

#### **DIMENSIONS** in millimeters



| MODEL AND<br>STYLE | SH5               | SH10      | SH25       | SH50       |
|--------------------|-------------------|-----------|------------|------------|
| A                  | 28.5 ± 1.5        | 35 ± 1.5  | 49 ± 1.3   | 70.2 ± 1.4 |
| B ± 0.2            | 12.5              | 15.9      | 19.8       | 21.4       |
| D ± 0.2            | 11.3              | 14        | 18.3       | 39.7       |
| E ± 0.5            | 16.3              | 19        | 28         | 50         |
| F                  | 6.8 ± 1.5         | 7.9 ± 1.5 | 11.1 ± 1.5 | 11 ± 1.2   |
| G ± 1              | 8.5               | 11        | 14         | 15.5       |
| H ± 0.7            | 6.2               | 7.9       | 9.9A       | 10.7       |
| J ± 0.5            |                   |           | 27.5       | 29.4       |
| Ø K ± 0.1          |                   |           | 3.2        | 3.2        |
| L max.             |                   |           | 15         | 15         |
| M ± 0.5            |                   |           | 8          | 8          |
| N ± 0.3 1.6        |                   | 2         | 2.4        | 2.4        |
| Ø P min. 2.1       |                   | 2.1       | 2.1        | 2.1        |
| Q                  | Q 25.3 ± 1.5 30.6 |           | 44.6 ± 1.3 | 66.5 ± 1.4 |
| Weight in g        | 3                 | 8.8       | 16.5       | 30.8       |

| ELECTRICAL SPECIFICATIONS |   |      |                       |   |                |                   |                |
|---------------------------|---|------|-----------------------|---|----------------|-------------------|----------------|
| VIS                       | HAY SFERNICE MODEL AND STYLE                                    |      |                       | SH5   | SH10           | SH25              | SH50           |
| Chassis mounted resistors | Chassis mounted resistors: 413 cm <sup>2</sup> for SH5 and SH10 | o.t  | 25 °C                 | 10 W  | 12.5 W         | 25 W              | 50 W           |
|                           | 536 cm <sup>2</sup> for SH25 and SH50                           | at - | 70 °C                 | 8 W   | 10 W           | 20 W              | 40 W           |
| wer                       | Unama and a section of  | at — | 25 °C                 | 4 W   | 6 W            | 9 W               | 12 W           |
| Po                        | Unmounted resistors   |      | 70 °C                 | 3.2 W   | 4.8 W          | 7.2 W             | 9.6 W          |
| Ohr                       | nic Value   |      |                       | 0.1 Ω<br>3.3 kΩ                                     | 0.1 Ω<br>15 kΩ | 0.1 Ω<br>33 kΩ    | 0.1 Ω<br>51 kΩ |
| Tolerance                 |   |      |                       | ± 5 %   |                |                   |                |
| Rated Maximum Voltage     |   |      | 160 V                 | 250 V   | 550 V          | 1285 V            |                |
| Dielectric Strength VRMS  |   |      | 800 V                 | 1000 V  | 2000 V         | 2000 V            |                |
| Insu                      | Insulation Resistance   |      |                       | $> 10^4  \text{M}\Omega$ $> 3.10^4  \text{M}\Omega$ |                | O <sup>4</sup> MΩ |                |
| Temperature Coefficient   |   |      | ± 50 ppm/°C Rn > 50 Ω |   |                |                   |                |
| Climatic Category         |   |      | 55/200/56             |   |                |                   |                |
| Temperature Limits        |   |      |                       | - 55 °C   | + 200 °C       |                   |                |

Document Number: 50014 Revision: 07-Dec-06

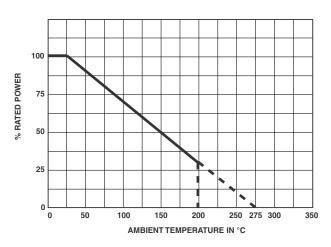


### Heatsink Encased Wirewound Power Resistors Industrial Applications

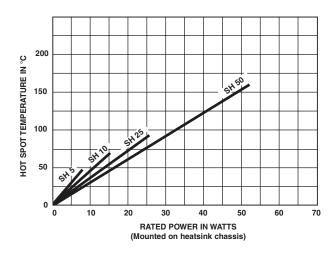
## Vishay Sfernice

| PERFORMANCE        |                                     |                     |          |  |  |  |  |
|--------------------|-------------------------------------|---------------------|----------|--|--|--|--|
| TESTS              | CONDITIONS                          | TYPICAL DRIFTS      |          |  |  |  |  |
| Momentary Overload | 5 Pn/5 s                            | ± 0.5 % max.        | + 0.05 Ω |  |  |  |  |
| Climatic Sequence  | - 55 °C + 200 °C<br>5 cycles        | ± 1 % max. + 0.05 9 |          |  |  |  |  |
| Load Life          | Nominal power Pn<br>1000 h at 25 °C | ± 1 % max.          | + 0.05 Ω |  |  |  |  |

#### **POWER RATING CHART**



#### **TEMPERATURE RISE**



#### **PACKAGING**

Bag of 10 units

### **MARKING**

SFERNICE trademark, model, style, nominal resistance (in  $\Omega$ ), tolerance (in %), manufacturing date.

| ORDERING INFORMATION |       |               |           |           |                |  |  |
|----------------------|-------|---------------|-----------|-----------|----------------|--|--|
| SH                   | 25    | <b>10 k</b> Ω | 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 |  |  |  |

Document Number: 50014 Revision: 07-Dec-06



Vishay

## **Disclaimer**

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Revision: 18-Jul-08

Document Number: 91000 www.vishay.com