## Series SHP

Overall stability $\pm 5 \mathrm{ppm} /{ }^{\circ} \mathrm{C}$ from $+25^{\circ} \mathrm{C}$ to $+65^{\circ} \mathrm{C}$ (incl. VCR \& TCR)

We developed new material combinations and processing methods which make it possible to achieve a TCR (thermal coefficient of resistance) of up to $\pm 5 \mathrm{ppm}$ while maintaining the minimal VCR (voltage coefficient of resistance).

## Features

- up to 10 kV operating voltage
- Non-Inductive design
- ROHS compliant



## Technical Specifications

| Resistance value | $100 \mathrm{M} \Omega \leq 250 \mathrm{M} \Omega$ (other values on special request) |
| :---: | :---: |
| Resistance tolerance | $\pm 1$ \% standard (lower on special request for limited ohmic values) |
| Temperature coefficient | $\pm 5 \mathrm{ppm} /{ }^{\circ} \mathrm{C}$ from $+25^{\circ} \mathrm{C}$ to $+65^{\circ} \mathrm{C}$ in 10 degree steps (incl. VCR \& TCR) referenced to $25^{\circ} \mathrm{C}$ |
| Maximum working voltage | 10 kV DC |
| Dielectric strength | $\leq 10 \mathrm{kV} \mathrm{DC} \mathrm{based} \mathrm{on} \mathrm{the} \mathrm{coating}$ |
| Insulation resistance | $10 \mathrm{G} \Omega \mathrm{min}$. at $1,000 \mathrm{~V} \mathrm{DC}$ |
| Power rating | up to 1 W |
| Load life | 1,000 hours at rated power at $70^{\circ} \mathrm{C}$, $\Delta R 0.20$ \% max. |
| Load life stability | 0.20 \% per 1,000 hours at $70^{\circ} \mathrm{C}$ |
| Moisture resistance | MIL-Std-202, method 106, $\triangle$ R 0.4 \% max. |
| Thermal shock | MIL-Std-202, method 107, Cond. A, $\Delta R 0.20$ \% max. |
| Encapsulation | standard coating: silicone conformal we recommend $2 \times$ polyimide coating for use in oil and potted applications (ask for details) |
| Lead material | OFHC copper, tin-plated |
| Weight | depending on model no. (ask for details) |



## How to make an order

Model no._Ohmic value_Tolerance
For example:
SHP-52 150M 1\%

## Model Specifications

| Model no. | Wattage | Max. kV | Resistance values |  | Dimensions in millimeters (inches) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Min. $\Omega$ | Max. $\Omega$ | $\begin{array}{r} \mathbf{A}_{ \pm 0.50} \pm 0.02 \end{array}$ | $\text { B } \begin{array}{r}  \pm 0.50 \\ \pm 0.02 \end{array}$ | $\mathbf{C} \begin{gathered} \pm 0.50 \\ \pm 0.02 \end{gathered}$ |
| SHP-39 | 0.6 W | 8 | 100 M | 250 M | $\begin{gathered} 39.50 \\ (1.555) \end{gathered}$ | $\begin{gathered} 8.20 \\ (0.323) \end{gathered}$ | $\begin{gathered} 1.00 \\ (0.040) \end{gathered}$ |
| SHP-52 | 1 W | 10 | 100 M | 250 M | $\begin{gathered} 52.10 \\ (2.051) \end{gathered}$ | $\begin{gathered} 8.20 \\ (0.323) \end{gathered}$ | $\begin{gathered} 1.00 \\ (0.040) \end{gathered}$ |

for longer types SHP-78 on special request (ask for details)

## Dimensions in mm [inches]



