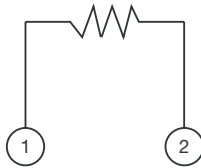


## High Value Precision SIP



### SCHEMATIC



### FEATURES

- High nominal precision resistors (value range 50K to 10M)
- Highly accurate resistance tolerance (up to  $\pm 0.01\%$ )
- Conformal coating flame resistant (UL 94 V-) rating
- Ultra low TCR ( $\pm 5$  ppm/ $^{\circ}$ C)
- High voltage
- Flame resistant (UL 94 V-0 rating)
- High voltage rating to 300 V
- Compliant to RoHS directive 2002/95/EC


**RoHS\***  
COMPLIANT

### APPLICATIONS

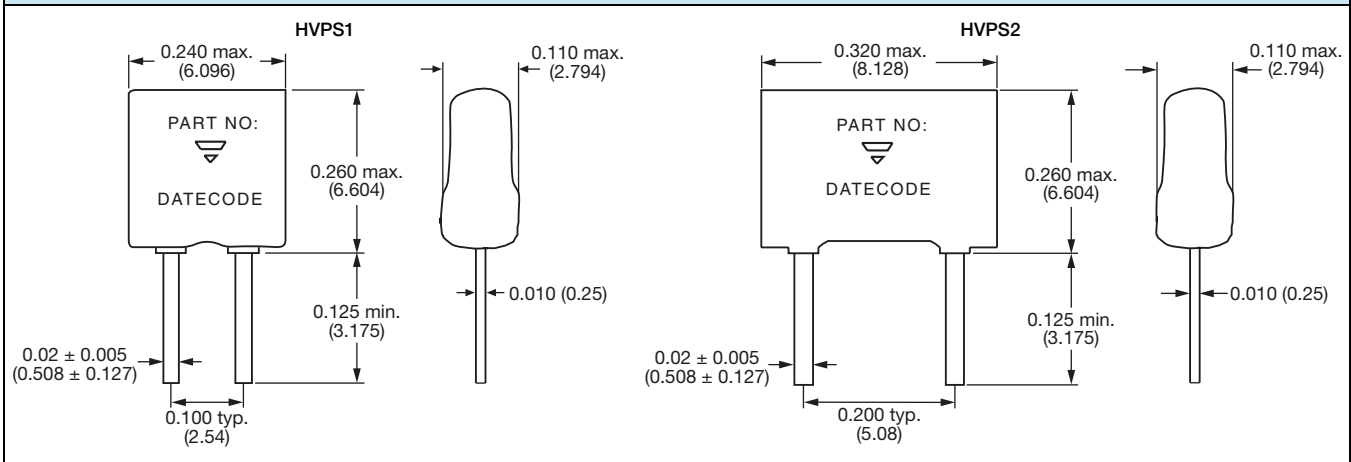
- Precise instrumentation (medical, test etc.)
- Precision amplifiers

### STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin/Lead Number	2	-
Resistance Range	50 000 $\Omega$ to 5000 k $\Omega$ (HVPS1) 100 000 $\Omega$ to 10 000 k $\Omega$ (HVPS2)	-
TCR: Absolute	5 ppm/ $^{\circ}$ C to 25 ppm/ $^{\circ}$ C	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C
TCR: Tracking	-	-
Tolerance: Absolute	$\pm 0.01\%$ to $\pm 1.0\%$	Maximum at + 70 $^{\circ}$ C
Tolerance: Ratio	-	-
Power Rating: Resistor	125 mW (HVPS1) 250 mW (HVPS2)	-
Power Rating: Package	-	-
Stability: Absolute	$\Delta R \pm 0.05\%$	2000 h at + 70 $^{\circ}$ C
Stability: Ratio	-	-
Voltage Coefficient	< 1.0 ppm/V	-
Working Voltage	250 V (HVPS1) 300 V (HVPS2)	-
Operating Temperature Range	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C	-
Storage Temperature Range	-	-
Noise	< - 30 dB	-
Thermal EMF	< 0.1 $\mu$ V/ $^{\circ}$ C	-
Shelf Life Stability: Absolute	$\Delta R \pm 0.01\%$	1 year at + 25 $^{\circ}$ C
Shelf Life Stability: Ratio	-	-

\* Pb containing terminations are not RoHS compliant, exemptions may apply

## DIMENSIONS AND IMPRINTING in inches and millimeters

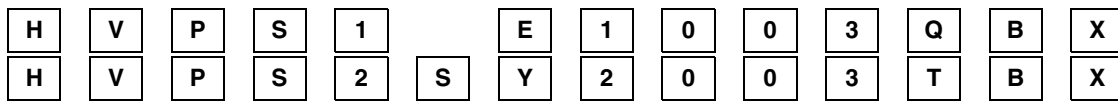


## MECHANICAL SPECIFICATIONS

Resistive Element	Passivated nichrome
Substrate Material	Alumina
Body	Epoxy coated
Terminals	Copper alloy
Tin/Lead Option	Sn60 - Sn63
Lead (Pb)-free Option	Sn96.5, Ag3.0, Cu0.5
Tin/Lead and Lead (Pb)-free Finish	Hot solder dip

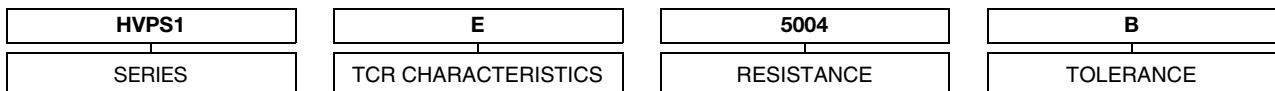
## GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: HVPS1E1003QBX



GLOBAL MODEL (3 or 4 digits)	TCR	RESISTANCE	TOLERANCE	PACKAGING
<b>HVPS1</b> <b>HVPS2</b> (Tin lead)  <b>HVPS1S</b> <b>HVPS2S</b> (Lead (Pb)-free) (e1)	<b>E</b> = 25 ppm/°C <b>D</b> = 15 ppm/°C <b>Y</b> = 10 ppm/°C <b>Z</b> = 5 ppm/°C	First 3 digits are significant figures. Last digit specifies the number of zeroes to follow. e.g.: 1001 = 1K 1002 = 10K 1005 = 10M	<b>A</b> = 0.05 % <b>B</b> = 0.1 % <b>D</b> = 0.5 % <b>F</b> = 1.0 % <b>Q</b> = 0.02 % <b>T</b> = 0.01 %	<b>BX</b> = Conductive foam box

Historical Part Number example: HVPS1E5004B (for reference purposes only)





## 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.