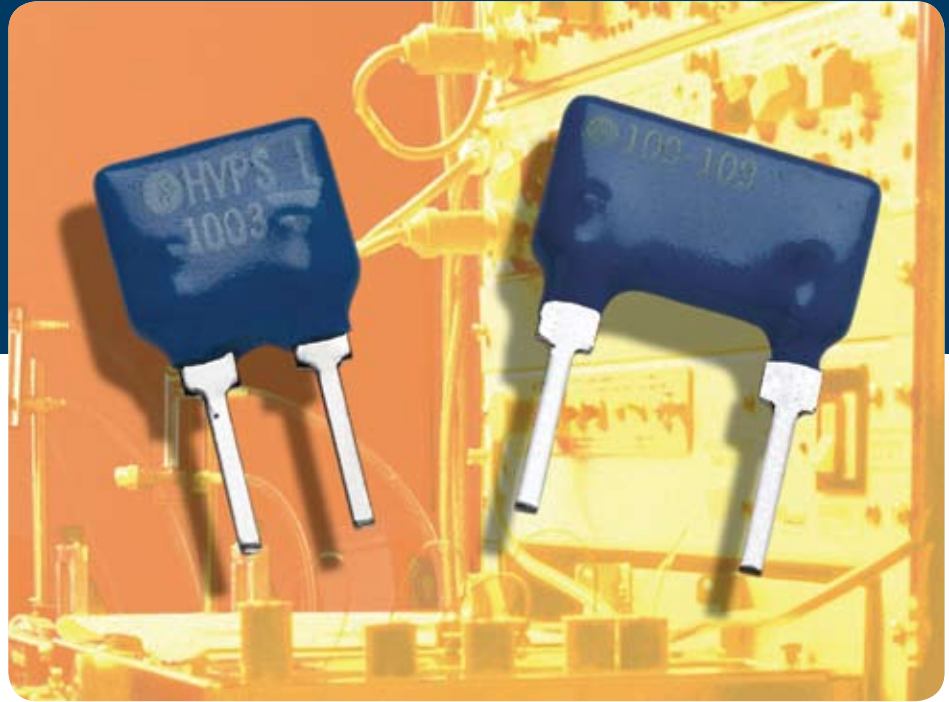




RESISTIVE PRODUCTS

Model HVPS Series



High Value Thin Film Precision Resistor Series

HVPS Series

KEY BENEFITS

- Tight tolerances to $\pm 0.01\%$
- Resistance range 50 K to 10 M Ω
- Low TCR to ± 5 ppm/ $^{\circ}$ C
- Thin film stability 500 ppm at 70 $^{\circ}$ C for 2000 hours
- Low Noise < - 30 DB

APPLICATIONS

- Instrumentation amplifiers
- Precision voltage dividers
- Measurement systems
- Test Range selection

Datasheet is available on our web site at www.vishay.com
www.vishay.com/doc?60091

High Value Precision SIP

FEATURES

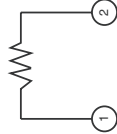
- Lead (Pb)-free available
- High nominal precision resistors (value range 50K - 10M)
- Highly accurate resistance tolerance (up to ± 0.01 %)
- Conformal coating flame resistant (UL94V-) Rating
- Ultra low TCR (± 5 ppm/°C)



RoHS* COMPLIANT



SCHEMATIC

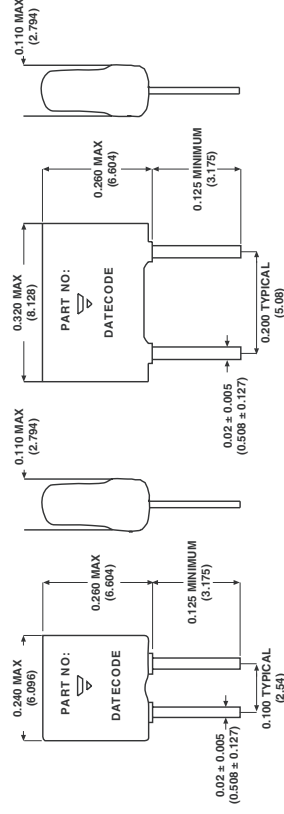


APPLICATIONS

- Precision Instrumentation (Medical, Test etc.)
- Precision Amplifiers

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated Nichrome	
Resistance Range	HVPS 1 50 kΩ to 5 MΩ HVPS 2 100 kΩ to 10 MΩ	
TCR	5, 10, 15, 25 ppm/°C	-55 to +125 °C
Tolerance	0.01 %, 0.02 %, 0.05 % 0.10 %, 0.50 %, 1.0 %	Max at +70 °C Max at +70 °C
Stability	500 ppm	2000 hours at +70 °C
Voltage Coefficient	< 1.0 ppm/Volt	
Working Voltage/Power Rating	HVPS 1 250 Volts/125 mW HVPS 2 300 Volts/250 mW	
Operating Temperature Range	-55 °C to +125 °C	
Noise	< -30 dB	
Thermal EMF	< 0.1 μV/°C	
Shelf Life Stability	< 100 ppm	1 year at +25 °C

DIMENSIONS AND INPRINTING in inches [millimeters]



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

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For technical questions, contact thin-film@vishay.com

MECHANICAL SPECIFICATIONS	
Resistive Element	Passivated Nichrome
Substrate Material	99.6 % Alumina
Body	Epoxy
Terminals	Copper with Nickel barrier
Plating	SN 60
Marking Resistance to Solvents	Per MIL-PRF-83401
Lead (Pb)-free Option	96.5 % Sn, 3.0 % Ag, 0.5 % Cu
Lead (Pb)-free Finish	Hot Solder Dip

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: HVPS1E1003QBX (preferred part number format)

H	V	P	S	1	E	1	0	0	3	Q	3	B	X		
H	V	P	S	2	S	Y	2	0	0	T	3	B	X		
GLOBAL MODEL (5 or 6 digits)															
TCR E = 25 ppm/°C D = 15 ppm/°C C = 10 ppm/°C B = 5 ppm/°C A = 0.05 % Z = 5 ppm/°C															
RESISTANCE First 3 digits are significant figures. Last digit specifies the number of zeroes to follow. Example: 1001 = 1K 1002 = 10K 1005 = 10M															
TOLERANCE A = 0.05 % B = 0.1 % C = 0.5 % D = 1.0 % E = 0.02 % T = 0.01 %															
PACKAGING BX = Conductive Foam Box															
Historical Part Number example: HVPS1E5004B (will continue to be accepted)															
HVPS1				E				5004				B			
SERIES				TCR CHARACTERISTIC				RESISTANCE				TOLERANCE			

Revision 20-Apr-07