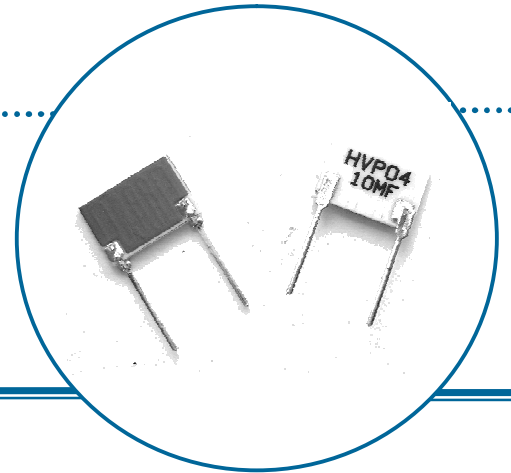


High Voltage Planar Resistors

HVP Series

- Excellent reliability
- Ideally suited for medical applications
- Voltages up to 5kV
- Resistance values up to 500M
- Small footprint
- RoHS compliant
- Planar construction gives low inductance and capacitance

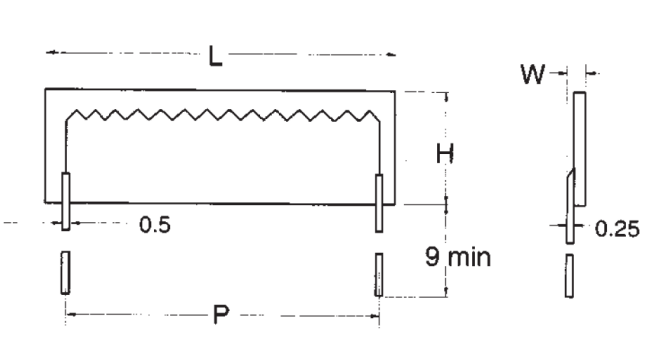


Electrical Data

		HVP04	HVP06
Power rating at 70°C	watts	0.4	0.6
Resistance range	ohms	1K0 to 250M	1K5 to 500M
Limiting element voltage (dc or ac peak)	kV	2	5
TCR (20°C to 70°C)	ppm/°C	100	
Resistance tolerance	%	1, 5	
Values		E24 preferred	
Ambient temperature range	°C	-55 to 155	

Other resistance, tolerance and TCR values are available on request.

Physical Data

Dimensions (mm)					
Type	L ±0.75	H ±0.5	W ±0.5	P ±0.5	
HVP04	10.16	6.35	2	7.62	
HVP06	12.7	6.35	2	10.16	

General Note

Welwyn Components reserves the right to make changes in product specification without notice or liability. All information is subject to Welwyn's own test data and is considered accurate at time of print.

ÓWelwyn Components Limited

Welwyn Electronics Park, Bedlington, Northumberland, NE22 7AA, England. Tel: 01670 822181 Fax: 01670 829465 Web: www.welwyn-tt.com

Construction

Conductor pads are printed to the rear and front faces of a 96% alumina substrate. A specially selected high voltage thick film resistor ink, based on a ruthenium oxide/glass system, is printed between the front face conductors and then covered in an overglaze before being protected with a special screen printed material which gives excellent high voltage and climatic performance.

Marking Type, resistance value and tolerance are legend marked in black ink on the rear of the component. The resistance value conforms to IEC 62.

Solvent Resistance The component protection and marking are resistant to all normal industrial cleaning solvents suitable for printed circuit boards

Terminations Solder coated phosphor bronze leadframe terminations are solder dipped in SnAgCu and meet the following IEC requirements:

IEC 68.2.21 – Strength
IEC 115-1, Clause 4.17.3.2 – Solderability

Packaging Packed in foam within a box. See Ordering Procedure for box quantities.

Performance Data

		Maximum	Typical
Load at rated power: 1000 hours at 70°C	ΔR%	1	0.25
Dry heat: 1000 hours at 155°C	ΔR%	1	0.25
Shelf life: 12 months at room temperature	ΔR%	0.3	<0.1
Derating from power at 70°C		Zero at 155°C	
Climatic	ΔR%	1	0.3
Climatic category		-55/155/56	
Long term damp heat	ΔR%	1	0.3
Temperature rapid change	ΔR%	0.25	0.02
Resistance to solder heat	ΔR%	0.25	0.02
Vibration and bump	ΔR%	0.25	0.02
Voltage coefficient of resistance	ppm/V	5	<3

Application Notes

Due to the high voltage which can appear between the resistor body and any adjacent metal part, resistors should be mounted at an adequate distance from other conducting parts.

Due to the possibility of surface condensation it is recommended that high voltages are not applied to resistors in areas of high humidity without the application of suitable moisture resistant lacquer.

Design Flexibility The experience of Welwyn engineers has been used to design this generation of high voltage planar resistors to be suitable for a majority of applications. However, should an application require particular consideration, Welwyn designers are able to provide advice and where applicable, to recommend a non-standard product. Special sizes, designs etc, can be prototyped at short notice.

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Ordering Procedure

Example: HVP06 at 15 megohms and 1% tolerance and packed in a box with a standard quantity of 160 pieces:

HVP06 - 15MF B016

Type _____

Value (use IEC62 code) _____

Tolerance (use IEC62 code) _____

F	1%
J	5%

Packing _____

B02	Bulk	HVP04	200 / box	Standard
B016	Pack	HVP06	160 / box	

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