

## Open Air Low Value Shunt Resistors

### OLV Series

- Values down to 5mΩ
- Low inductance
- Wide range of power ratings and values
- Excellent current surge handling
- Radial format for direct insertion
- RoHS compliant

**OBSOLETE**

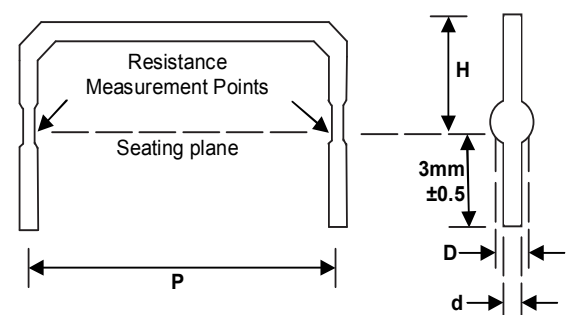


### Electrical Data

		OLV1	OLV2	OLV3
Power rating at 70°C	watts	1	2	3
Overload (5 seconds)	watts	6.25	12.5	18.8
Resistance values	mΩ	5, 10, 15, 20, 25	5, 10, 15, 20, 25, 50	5, 10, 15, 20, 25, 50, 100
TCR	ppm/°C	±200		
Resistance tolerance	%	±5		
Ambient temperature range	°C	-55 to 155		

### Physical Data

Dimensions (mm) & weight (g)						
Type	Value mΩ	P ±1	H ±1	D ±0.05	d ±0.05	Wt nom
OLV1	5	11.4	5.7	1.7	1.4	0.36
	10		7.4	1.5	1.2	0.29
	15		7.5	1.3	1	0.2
	20		6.7	1.1	0.8	0.13
	25		5.7	1	0.7	0.08
OLV2	5	12.7	7.5	1.3	1	0.21
	10		12.4	1.7	1.4	0.62
	15		12.4	1.5	1.2	0.39
	20		12.1	1.3	1	0.28
	25		14.5	1.3	1	0.3
	50		13.5	1	0.7	0.14
OLV3	5	15.2	13.3	1.7	1.4	0.59
	10		12.3	1.8	1.5	0.63
	15		11.5	1.5	1.2	0.41
	20		9.8	1.3	1	0.26
	25		21.8	1.5	1.2	0.61
	50		18.4	1.1	0.8	0.22
	100		22.5	0.9	0.6	0.16



Note: To be mounted in PCB with holes of diameter **D**  
The width of the compressed lancet is nominally **d + 0.6mm**.

### Construction

The resistive element is a single piece of low TCR resistance wire which is cut and formed to value.

### Terminations

The terminations are lancet formed for controlled PCB insertion height. The wire is tin plated and conforms to IEC 115-1 for solderability.

### General Note

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OLV Series

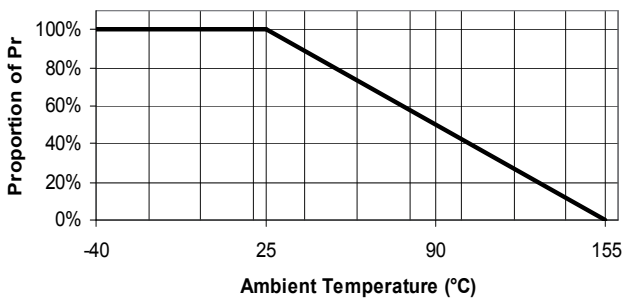
**Solvent Resistance**

The product is resistant to all normal industrial cleaning solvents suitable for printed circuits.

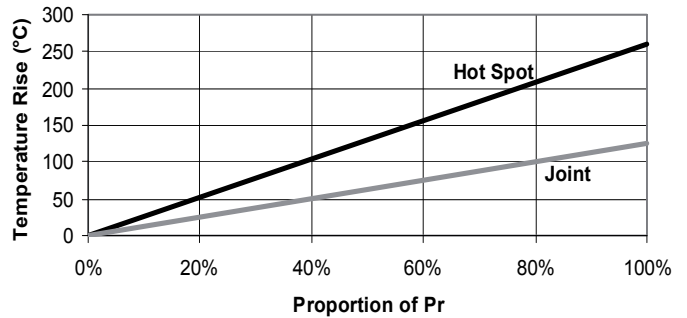
**Performance Data**

		Maximum
Endurance at rated temperature Full rated power for 1000hrs (1.5hrs on, 0.5hrs off) at 70°C	±ΔR%	5 + 0.05Ω
Overload (6.25 x rated power for 5s)	±ΔR%	5 + 0.05Ω
Temperature derating		See graph
Solderability		95% coverage

**Temperature Derating**

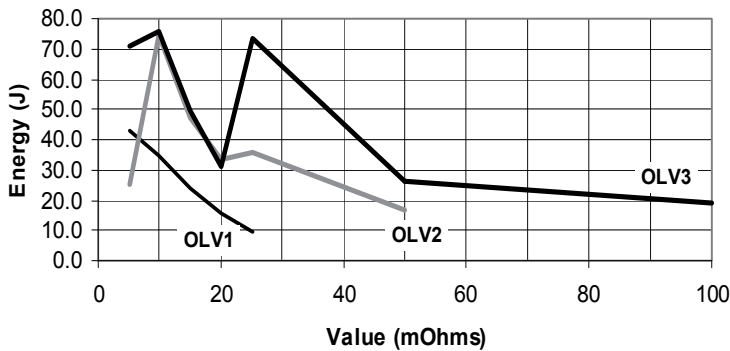


**Typical Temperature Rise**

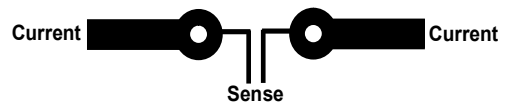


**Surge Energy**

(for durations ≤100ms)



**Suggested 4-Terminal Track Layout**



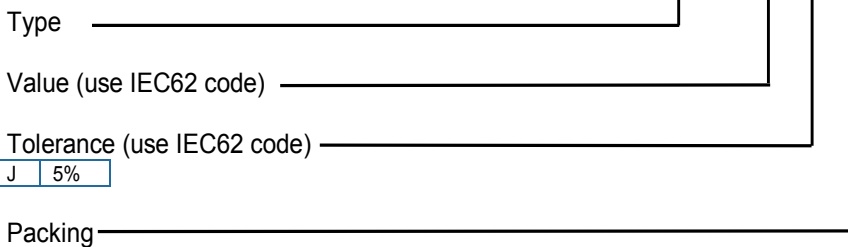
**Notes:**

1. Sense tracks should run close to each other and for a short distance to minimise loop area and noise pickup.
2. Current tracks should be dimensioned to give minimal self heating at the maximum design current.
3. At least one pair of connections (current or sense) should be on the component side of the PCB.

**Ordering Procedure**

Example: OLV3 at 10mΩ and 5% tolerance in bulk pack boxes of 400 pieces:

**OLV3-R01JB04**



B36	Bulk Pack	OLV1-R025	3600 / box	Standard
B2		OLV1-R02, OLV2-R05, OLV3-R10	2000 / box	
B12		OLV1-R015, OLV2-R005, OLV3-R05	1200 / box	
B08		OLV1-R005, OLV1-R01, OLV2-R015, OLV2-R02, OLV2-R025, OLV3-R015, OLV3-R02	800 / box	
B04		OLV2-R01, OLV3-R005, OLV3-R01, OLV3-R025	400 / box	

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