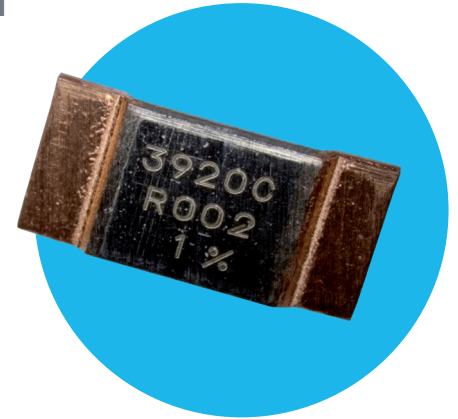


Fast Facts

LRMAP3920 – Low Resistance Metal Alloy Power Resistors

LRMAP3920 is a high power, low value SMT shunt resistor. With values down to $200\mu\Omega$ and a power rating on FR4 of 5W, the maximum measurable current is over 150A, and in most cases restricted only by the capacity of the PCB tracks.

A 10W power rating may be achieved for assemblies on thermal substrates like DBC ceramic or IMS, making this part ideal for power hybrid modules.



Market Segments

- Industrial
- Automotive
- Medical

Applications

- PSU
- Motor drive
- Process control
- Battery monitoring

Features

- 5W rating on FR4 PCB
- 10W rating on thermal substrate
- AEC-Q200 qualified
- Values $200\mu\Omega$ to $2m\Omega$
- High surge energy up to 14J

Benefits

- Low thermal impedance minimises the temperature rise and enhances the reliability of the assembly
- High surge tolerance gives reliable product performance under inrush and momentary short circuit conditions
- Good long term stability of value, low TCR and low thermal EMF all mean that a small part of the designer's error budget is consumed, enabling more design freedom elsewhere in the circuit

Our Advantage

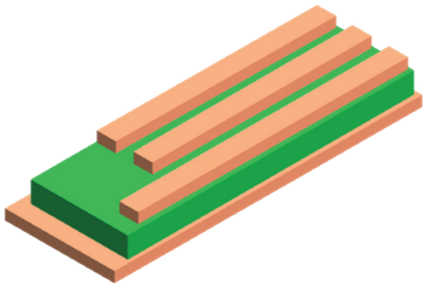
For circuit designers who need to guarantee stable and accurate sensing of AC and DC currents up to 150A in SMD assemblies we provide LRMAP3920 which matches or exceeds the power ratings of key competitors at most ohmic values as demonstrated in Appendix 1

Fast Facts

Appendix 1 Competitor Comparison

When comparing the power ratings, it is important to understand the mounting conditions. These are defined clearly on our datasheet, which presents a dual rating based on standard FR4 PCB and thermal substrate. A summary of the rating comparison with key competitors is shown below.

Power Rating (W) @ terminal temperature $\leq 120^{\circ}\text{C}$ mounted on FR4 PCB:			
Supplier & Type	TTE	Vishay	Isabellenhütte
Ohmic Value	LRMAP3920	WSLP3921	BVS
R0002	5	Not stated on datasheet	5
R0003	5		5
R0005	5		5
R0007	5		5
R001	4 / 5		4 / 5
R0015	4.5		4.5
R002	4		4



Power Rating (W) @ terminal temperature $\leq 70^{\circ}\text{C}$ on thermal substrate (IMS/DBC):			
Supplier & Type	TTE	Vishay	Isabellenhütte
Ohmic Value	LRMAP3920	WSLP3921	BVS
R0002	10	9	12
R0003	10	9	10
R0005	10	9	9
R0007	10	N/A	8
R001	7	5	7
R0015	7	5	7
R002	7	5	6

