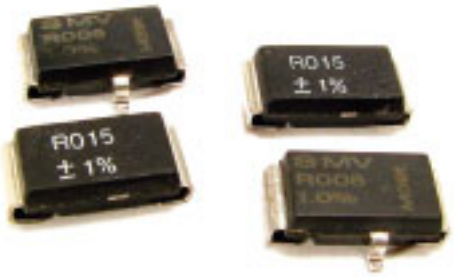
SMR, SMV

ISOTEK CORPORATION

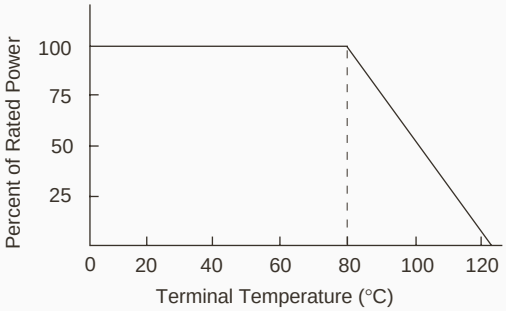
Precision Current Sensing Resistors

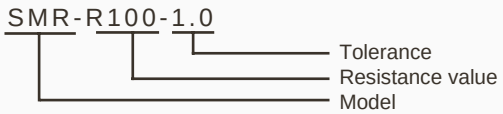


The SMR and SMV resistors are designed for precision current sensing in harsh environments. The molded package make them ideal for use in automotive applications. The SMV is a true Kelvin (four terminal) connection for the highest precision low-Ohmic current sensing.

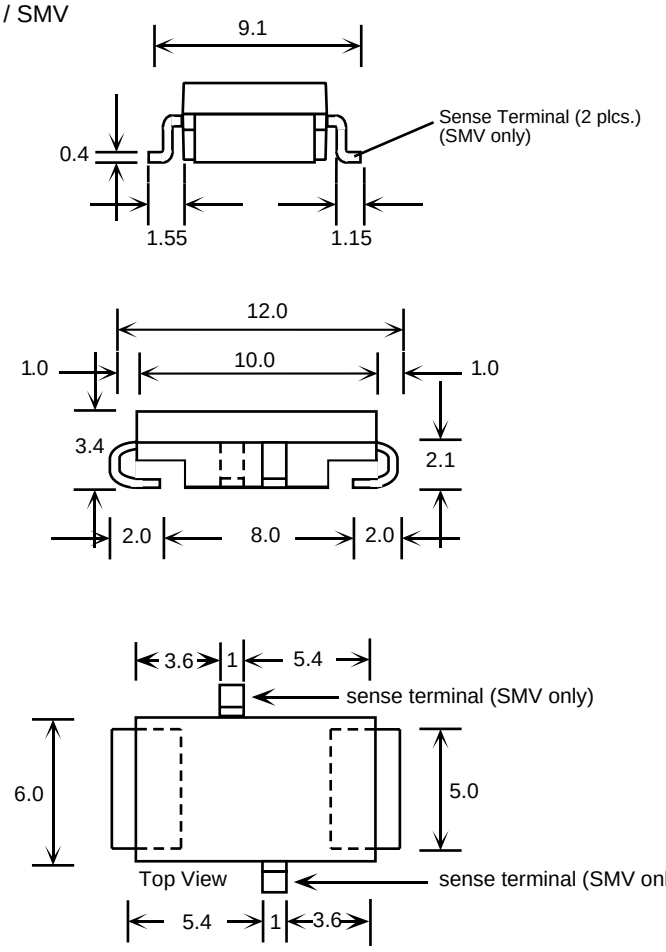
Both models use etched manganin foil laminated to a copper lead frame which serves as an efficient heat sink. The manganin provides for low tcr and long term stability under load.

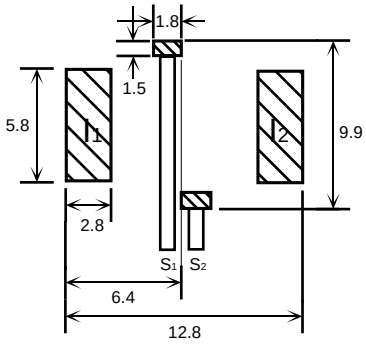
The SMR and SMV resistors are packaged in 24mm tape (EIA-481) and are compatible with all surface mount processes.





SMR / SMV





Proposed pcb layout for kelvin (SMV) connection

Dimensions in millimeters

Technical Data

Parameters	SMR	SMV
Resistance Range	0 Ω, 5 mΩ to 4.7 Ω	1 mΩ to 1 Ω
Tolerance	0.5%, 1.0%, 5.0%	0.5%, 1.0%, 5.0%
Temperature Coefficient of Resistance (20°C to 60°C)	< 50 ppm/°C	< 30 ppm/°C
Power Rating (Watts)	3 W	3 W
Dielectric Withstanding Voltage	1000 VAC	1000 VAC
Inductance	< 10 nH	< 10 nH
Thermal Resistance (foil/terminals)	Rth < 15°C/W	Rth < 15°C/W
Operating Temperature Range	-55°C to +140°C	-55°C to +140°C
Stability (Nominal Load at 80°C)	< 0.5% after 2000 hours	< 0.5% after 2000 hours

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