

Precision Resistor Type SMV

Spec Sheet R431-1/2 Dec 97

| technical data | |
|--|--------------------------------|
| resistance range | 1 mOhm - 1 Ohm |
| tolerances | 0.5 % / 1 % / 5 % |
| temperature coefficient (R > 10 mOhm) | < 30 ppm/K (20 °C to 60 °C) |
| applicable temperature range | -55 °C to +140 °C |
| load capacity | 3 W |
| internal thermal resistance (foil / terminals) | Rthi < 15 K/W |
| dielectric withstanding voltage | 1000 V AC |
| inductance (R = 10 mOhm) | < 10 nH |
| stability (nominal load at Tk = 80 °C) | deviation < 0.5 % after 2000 h |

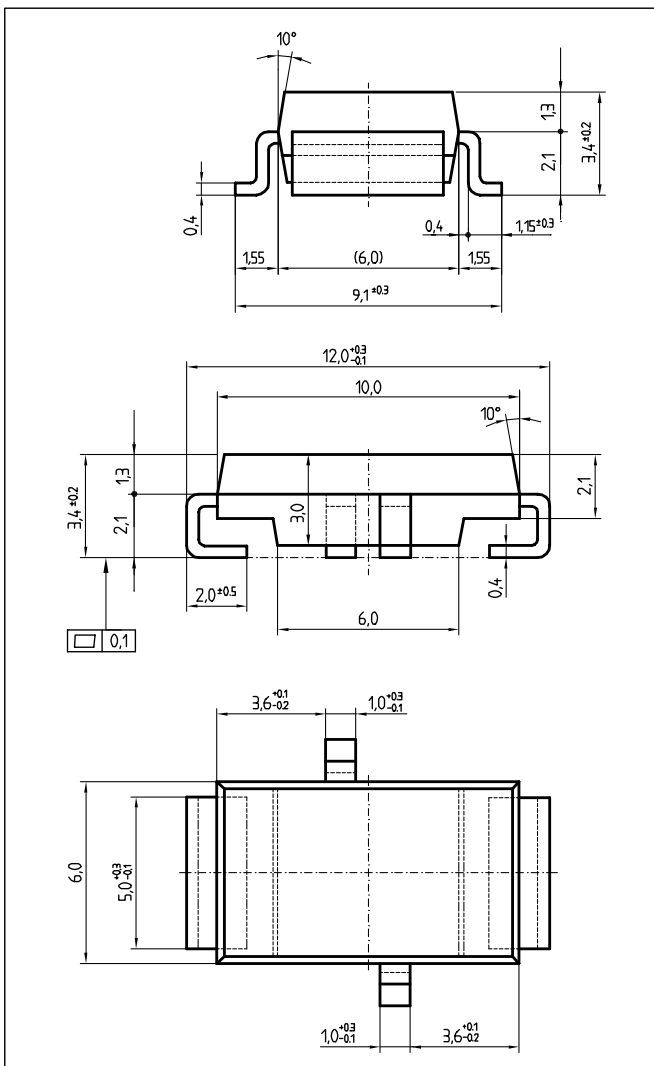
- Remarks:
- Standard resistance values according to E12 with the additional values of 2 and 5
 - Minimum quantity of other values on request
 - Tolerance 1% for values from 3 mOhm
 - Tolerance 0.5% for values from 10 mOhm

Resistor type **SMV** is the low ohmic version of type SMR in four-terminal execution. The temperature coefficient therefore is very low over the complete range; the resistance value is likewise independent on the quality of the solder connection.

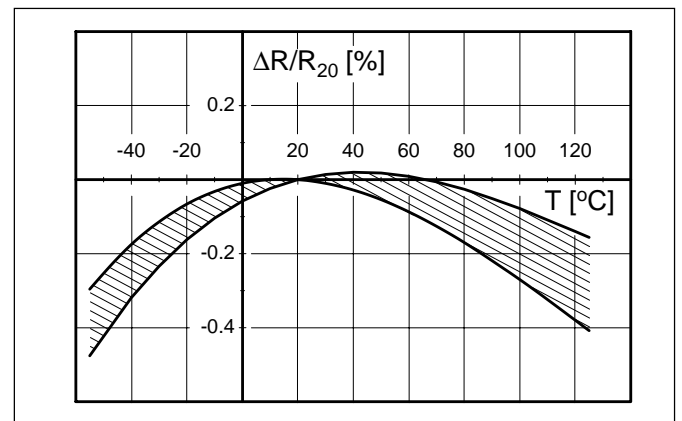
A high load capacity is achieved with the bulk copper connections in conjunction with a good heat - conducting substrate for the resistor element inside, as well as a temperature resistant epoxy resin housing.

The resistor is also well suitable for switched applications based on its low inductance.

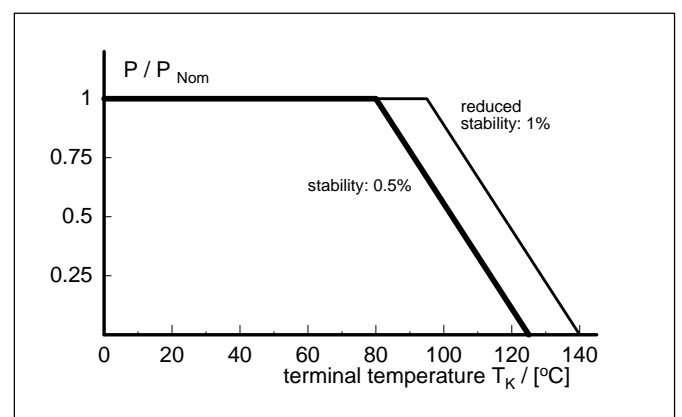
The type SMV is delivered on a 24 mm belt in accordance with EIA-481 for automated assembly.



dimensions (mm)

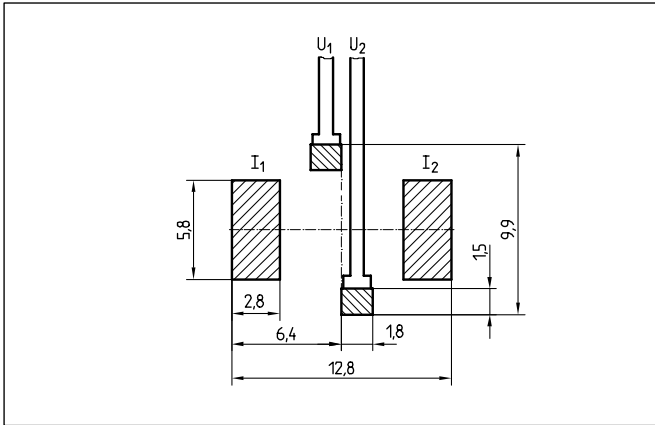


Temperature dependence of the electrical resistance of ISA-PLAN resistors

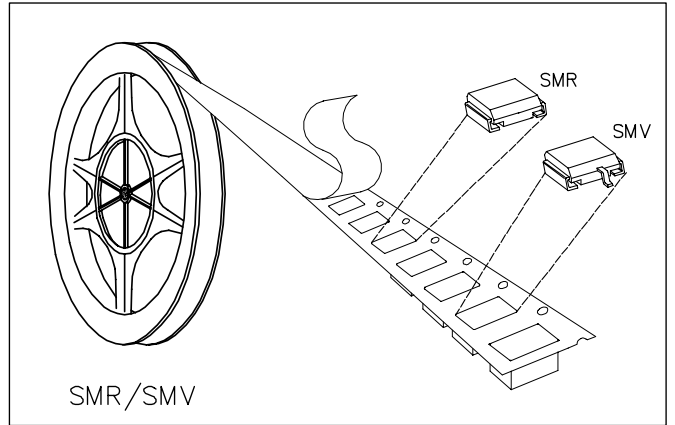


power derating curve

Proposal for PCB-layout



Tape & Reel information

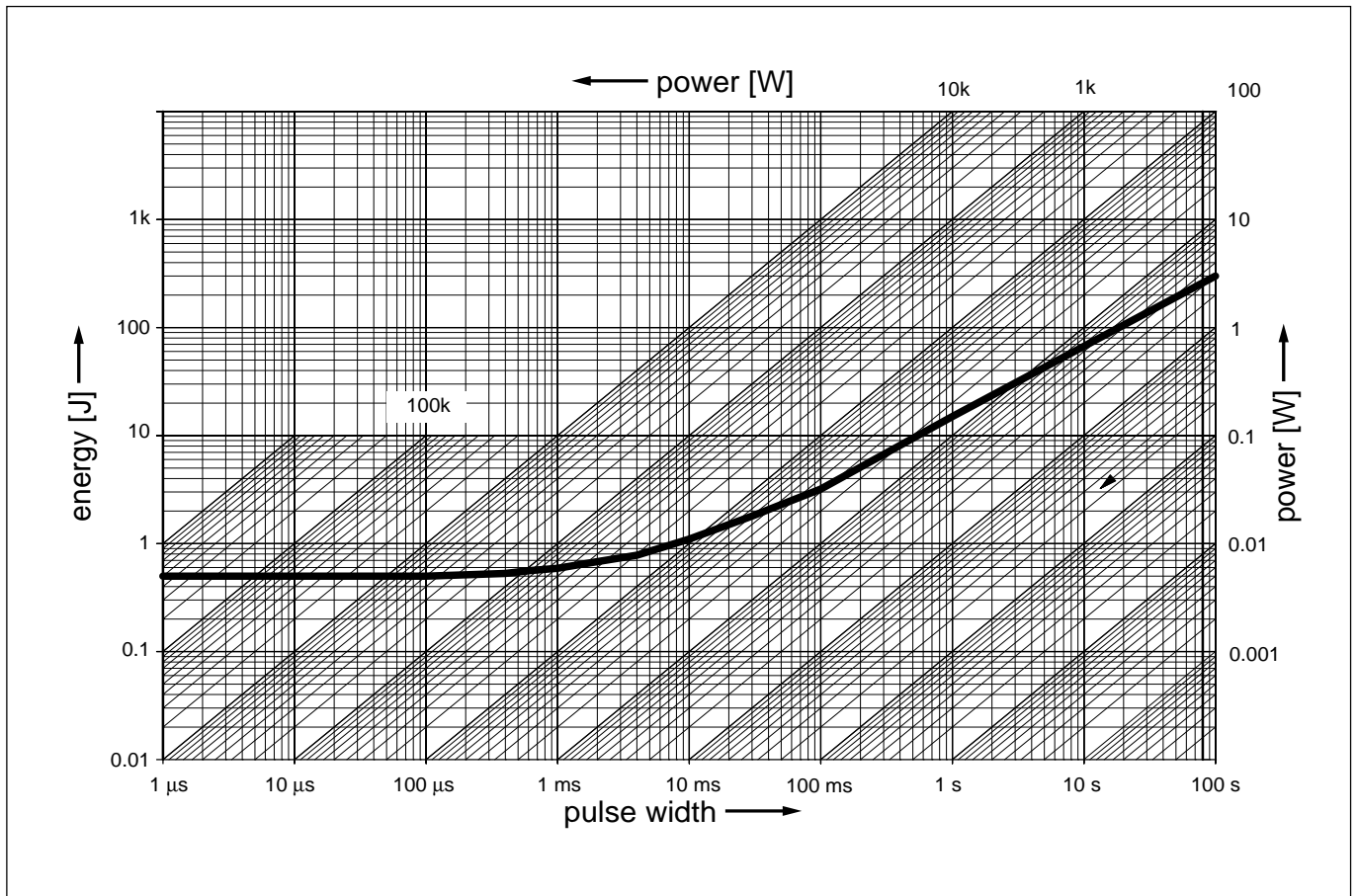


ordering example: SMV - R003 - 5

| type | resistance value | tolerance |
|------|------------------|-----------|
| SMV | 3 mOhm | 5 % |

24 mm carrier tape according to IEC 286-3 (EIA-481)

parts/reel: 1500 pcs



Limits:

dR/R₀ after 1*10⁶ pulse cycles : < 1%
 average pulsepower < 1/10 P₀

(Technical modifications reserved)