

ISA-PLAN®- 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:

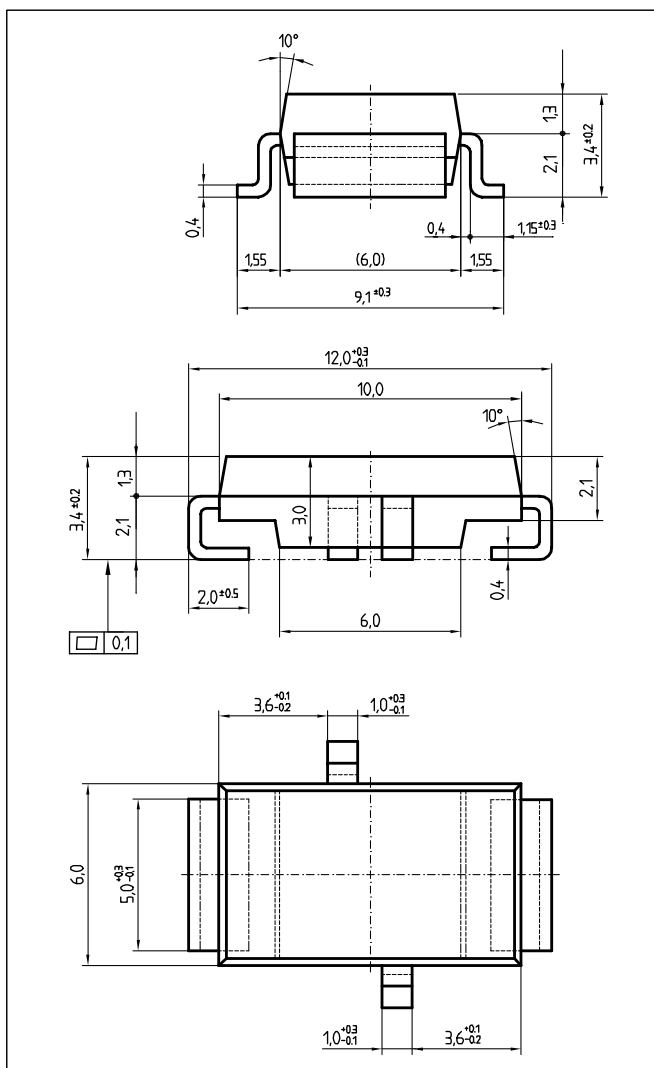
- Standard resistance values according to E12 with the additional values of 2 and 5
- Minimum quantity of other values on request
- Tolerance 1% for values from 3 mOhm
- Tolerance 0.5% for values from 10 mOhm

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.

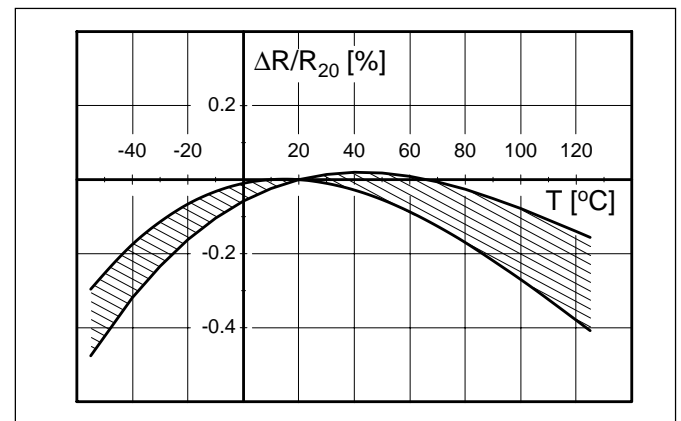
A high load capacity is achieved with the bulk copper connections in conjunction with a good heat - conducting substrate for the resistor element inside, as well as a temperature resistant epoxy resin housing.

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

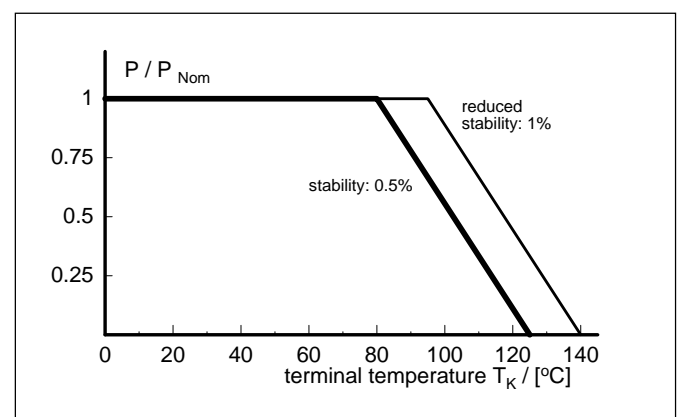
The type SMV is delivered on a 24 mm belt in accordance with EIA-481 for automated assembly.



dimensions (mm)

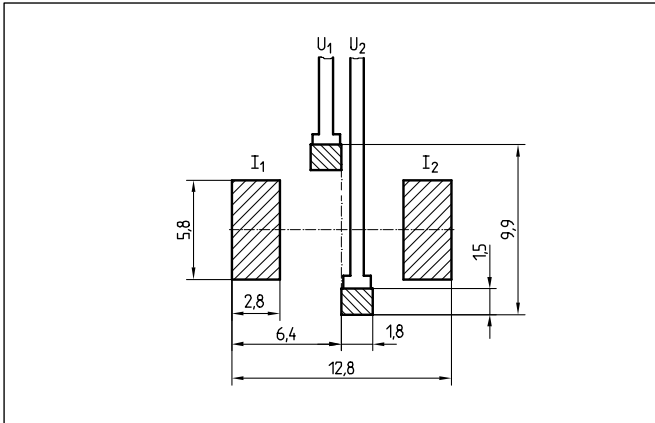


Temperature dependence of the electrical resistance of ISA-PLAN resistors

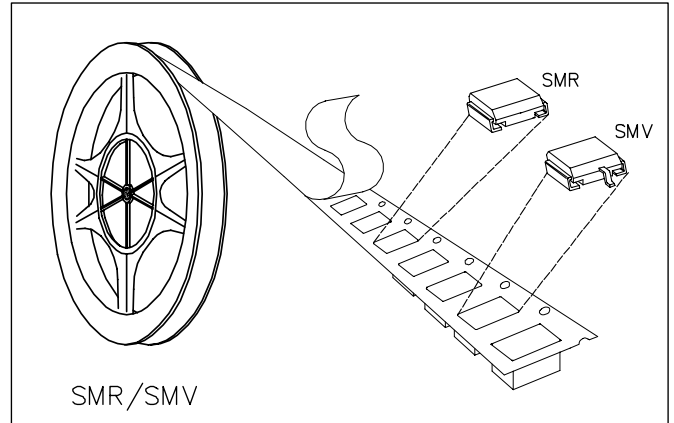


power derating curve

Proposal for PCB-layout



Tape & Reel information

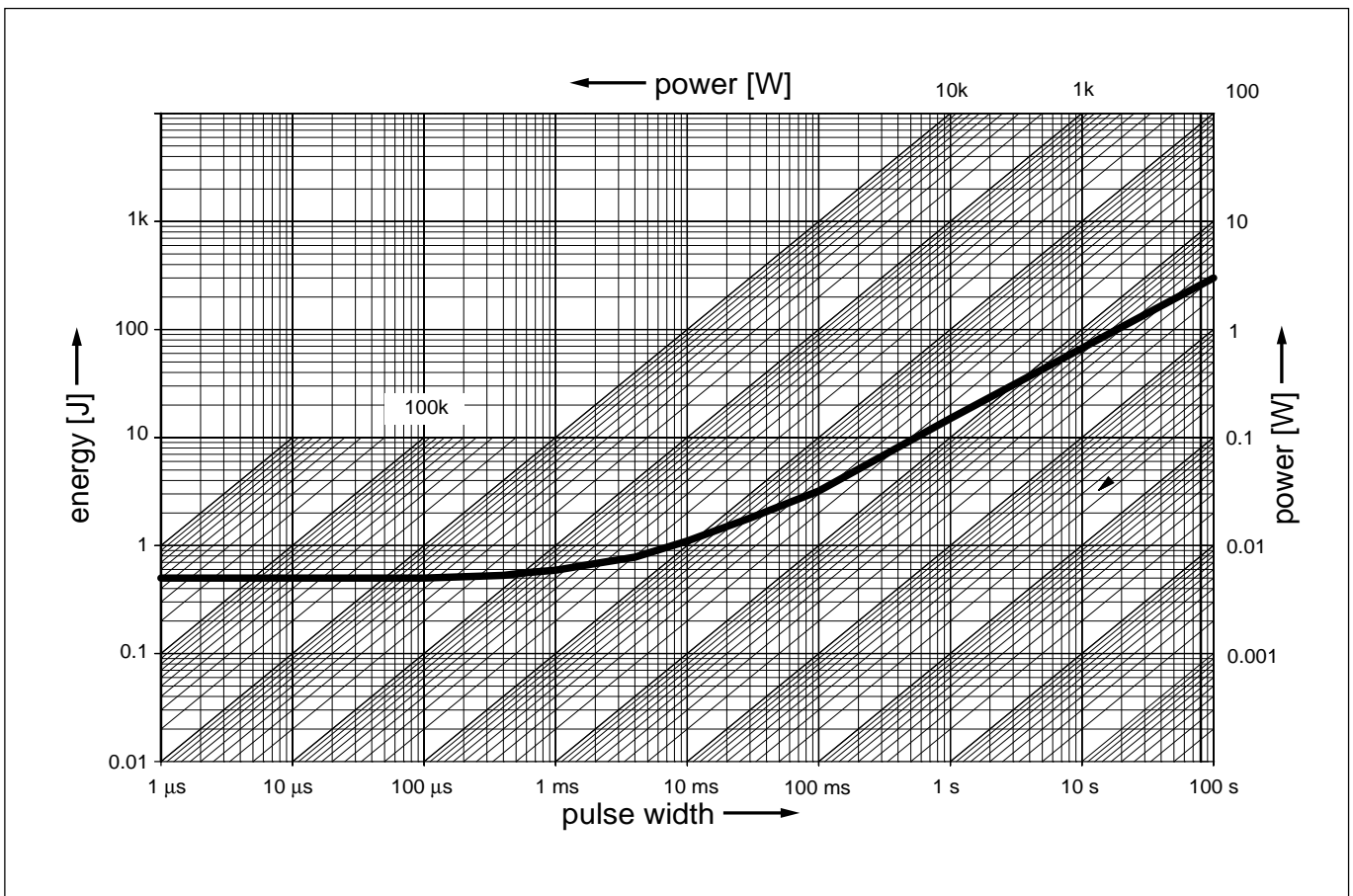


ordering example: **SMV - R003 - 5**

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/R_0 after $1 \cdot 10^6$ pulse cycles : < 1%
average pulsepower < $1/10 P_0$

(Technical modifications reserved)

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