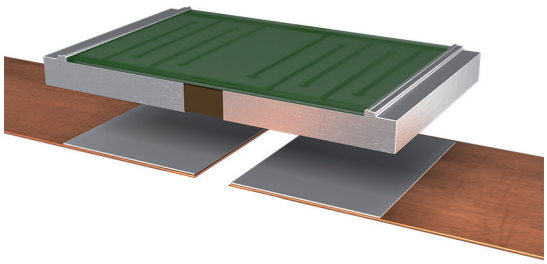
ISABELLENHÜTTE
Innovation by Tradition

ISA-PLAN® // SNUBBER POWER RESISTOR

SMT-V // Size 2817

PRELIMINARY VERSION



Features

- 6 W power rating at 70 °C
- Excellent long-term stability
- High pulse power rating
- Mounting: Reflow-, and IR-soldering
- AEC-Q200 qualified
- RoHS 2011/65/EU compliant

RoHS

Applications

- Current sensor for power hybrid applications
- Control systems for the automotive market
- Power modules
- Frequency converters
- Switch mode power supplies
- Snubber circuits

Technical data

Resistance values	**mOhm**	17.5
Tolerance	**%**	10
Temperature coefficient (20-60 °C)	**ppm/K**	<100
Applicable temperature range	**°C**	-65 to +170
Power rating $P_{70°C}$	**W**	6
Power rating $P_{90°C}$	**W**	5
Internal heat resistance (R_{thi})	**K/W**	16
Dielectric withstanding voltage	**V AC/DC**	200
Inductance	**nH**	<3

Ordering code

SMT - V - R0175 - 10.0 - S

- S — Snubber resistor
- 10.0 — Tolerance
- R0175 — Resistance value [Ohm] / „R" represents decimal point
- V — Material (NOVENTIN®)
- SMT — Type

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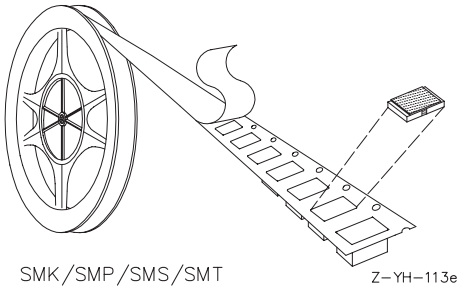
Recommended solder profile

Reflow- and IR-soldering				
Temperature	**°C**	260	255	217
Time	**sec**	peak	40	90

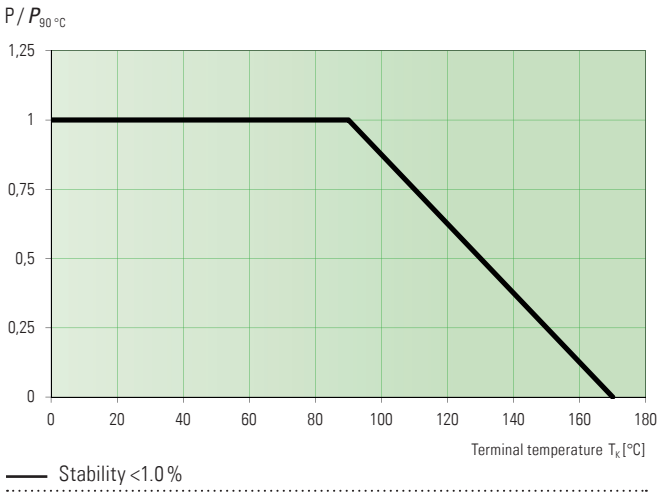
Slight deformations during soldering do not affect technical properties of the component.

Tape and reel information

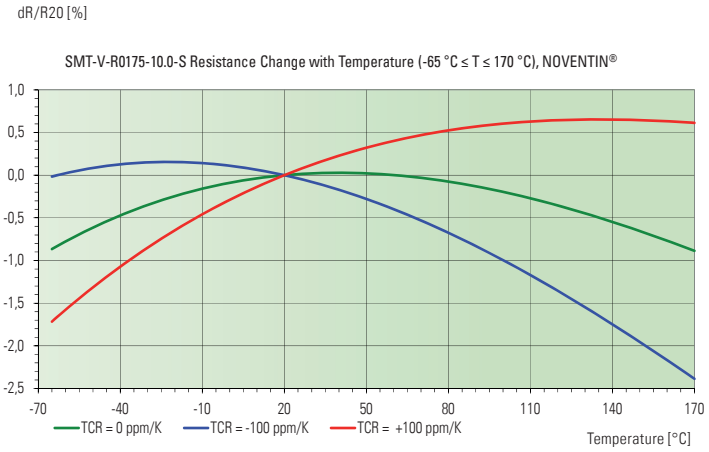
Specification		DIN EN 60286-3
Tape width	**mm**	12
Reel size	**inch**	13
Parts per reel	**pcs**	5000
Packaging weight	**g**	494



Power derating curve at 90 °C



Temperature dependence of the electrical resistance of SMT resistors



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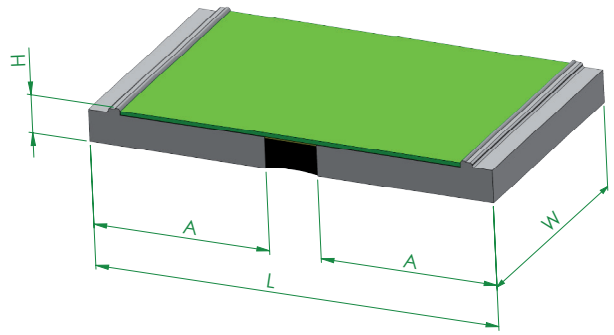
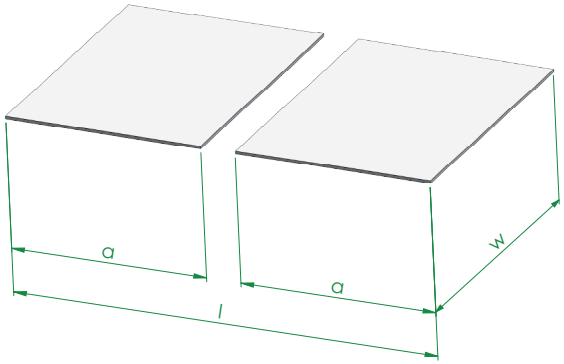
Mechanical dimensions and pcb-layout proposal (Reflow-soldering) [mm] // Z-YM-431





type	L	W	H	A
SMT-V	7.1 ±0.2	4.2 ±0.1	0.8 ±0.3	3.1

solder pad type:	l	w	a
SMT-V	7.4	4.6	3.4

Specification

Parameters	Test conditions	Specified values
Temperature Cycling	2000 cycles (-55 °C to +150 °C)	±1.0%
Low Temperature Storage and Operation	-65 °C for 250 h	±0.1%
Resistance to Soldering Heat	260 °C for 10 sec / 8h steam aging	±0.3%
Mechanical Shock	100 g, 6 ms half sine	±0.1%
Vibration, High Frequency	10 g, 10-2000 Hz, 24 h each axis	±0.1%
Operational Life	2000 h, T_K max at rated power	±1.0%
High Temperature Exposure	2000 h / 170 °C	±1.0%
Bias Humidity	+85 °C, 85 r.F., 1000 h	±0.5%

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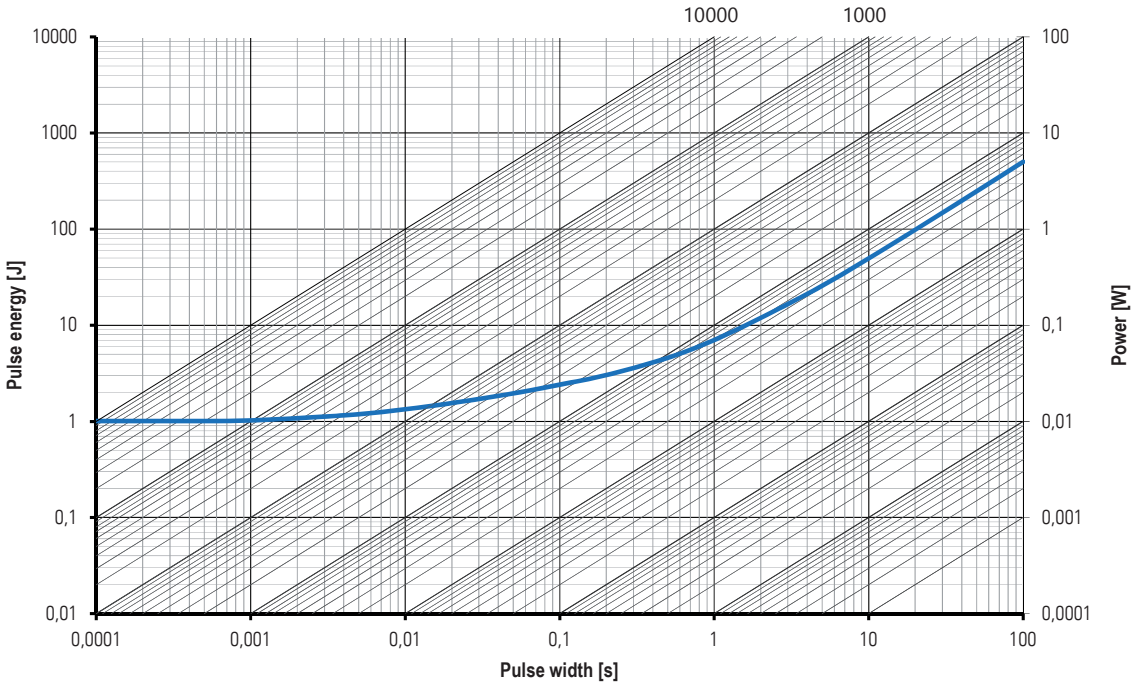
Maximum pulse energy respectively pulse power for permanent operation

SMT-V-R0175

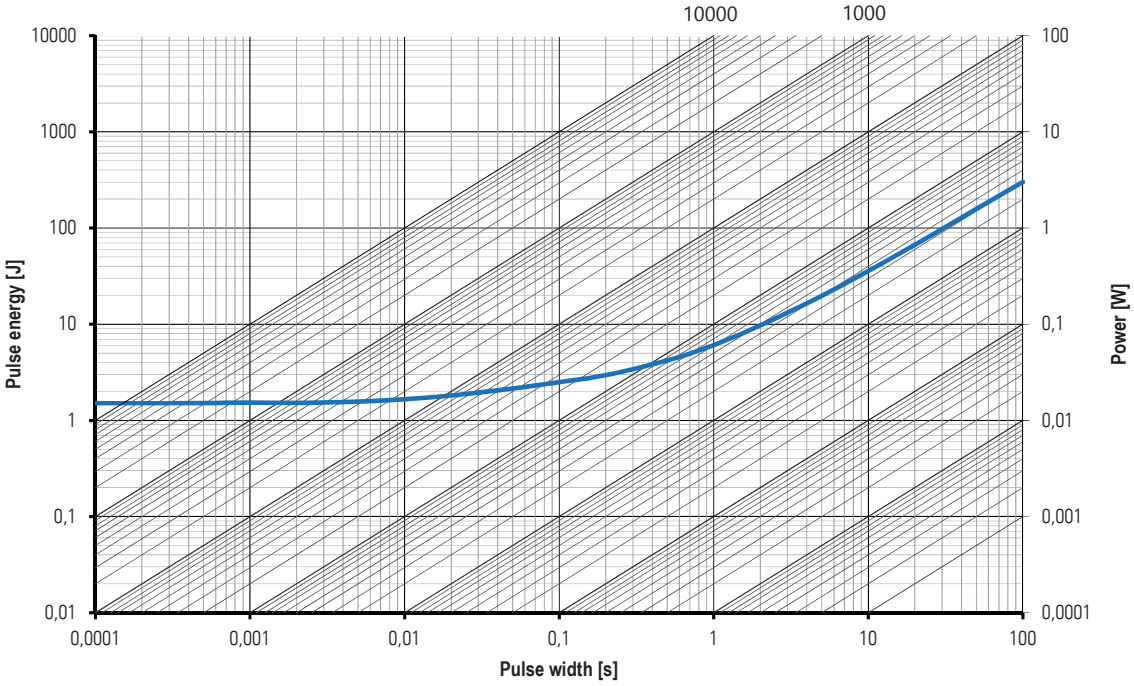
Maximum pulse energy / power continuous operation (T_K = 90 °C)



Example: Maximum pulse energy respectively pulse power single operation*, valid for 50 peak current pulses over lifetime

SMT-V-R0175

Maximum pulse energy / power single operation (T_K = 120 °C)



* the number of maximum permissible single operations over lifetime depends on the intended pulse energy and can be determined upon request