

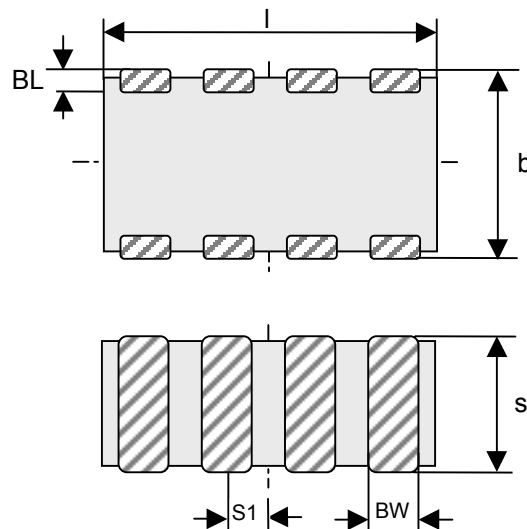
Designation system

- CA = Chip array
 05 = Dimensions of the device 05 x 08 (length x width in 1/100 inch)
 P = Design (parallel internal structure)
 4 = Number of elements
 S = Special tolerance of the varistor voltage
 14 = Maximum operating voltage
 T = Three layer terminations
 HS = Designed for protection of high speed datalines (low capacitance)
 G = Taped version (cardboard tape, 7" reel, 4000 pieces/reel)

Figure

- $l = 2.0 \pm 0.2$
 $b = 1.25 \pm 0.2$
 $s = 0.9 \text{ max.}$
 $BW = 0.3 \pm 0.1$
 $BL = 0.2 +0.2 / -0.1$
 $S1 = 0.25 \pm 0.1$

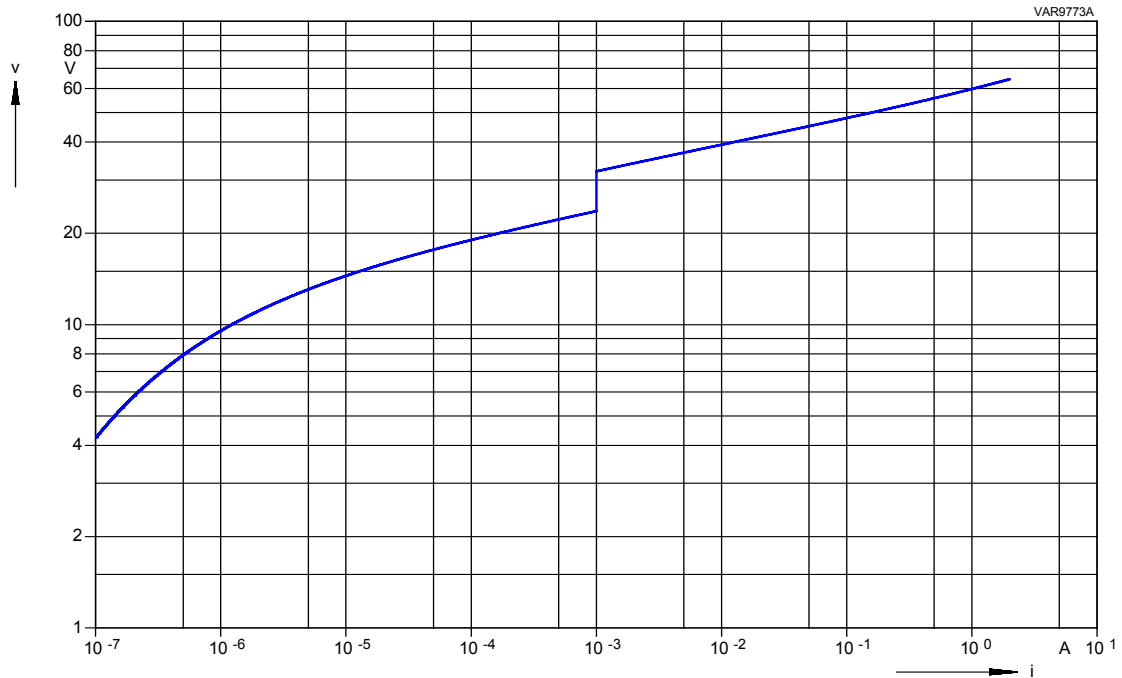
(all dimensions in mm)



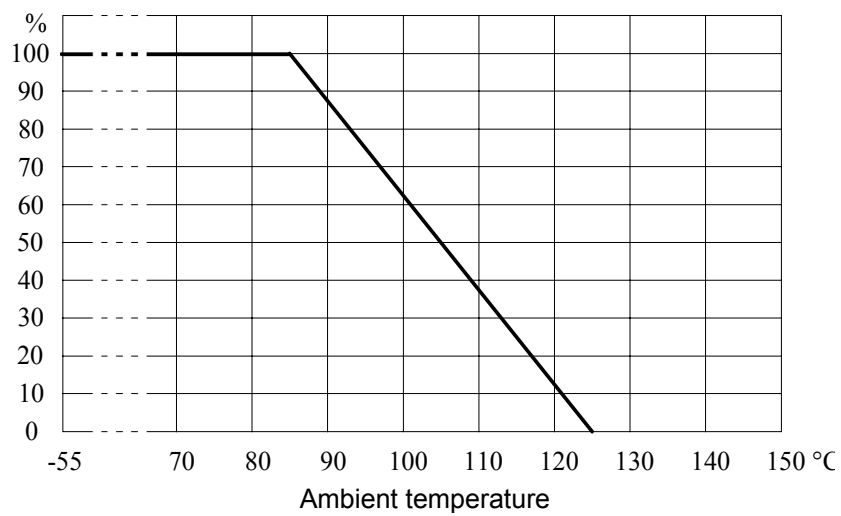
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V-I-characteristic



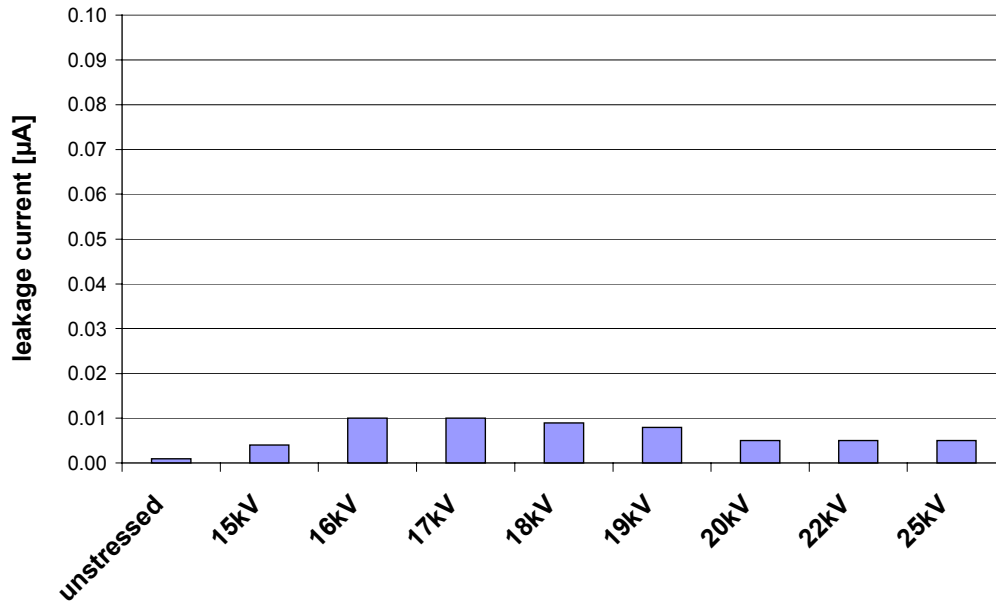
Max. current, energy and average power dissipation depending on ambient temperature



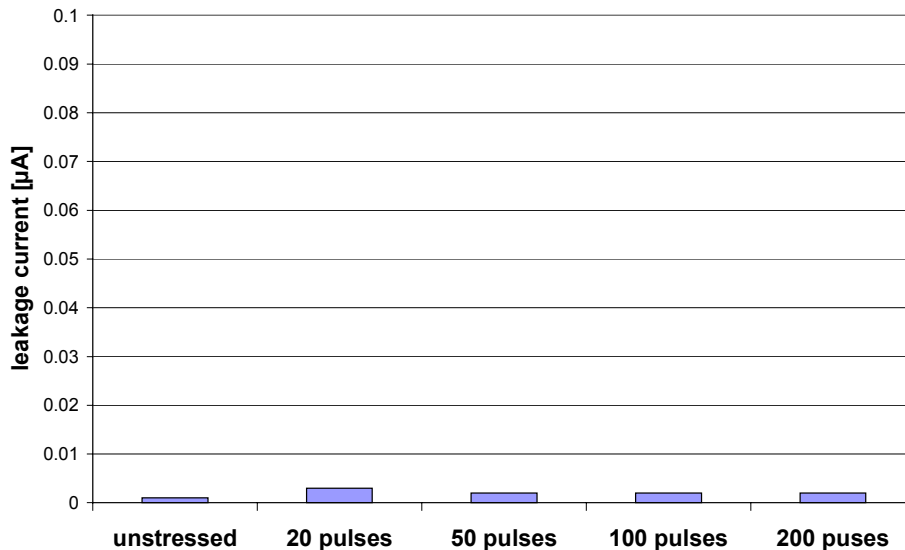
Electrical data

Maximum operating voltage	
RMS voltage	$V_{RMS} = 14 \text{ V}$
DC voltage	$V_{DC} = 16 \text{ V}$
Varistor voltage (@ 1 mA)	$V_V = 24 \text{ up to } 32 \text{ V}$
Maximum clamping voltage (@ 1 A)	$V_C = 59 \text{ V}$
DC leakage current (@ 4.2 V, 25 °C)	$I_S < 0.01 \mu\text{A (typ.)}$
DC leakage current (@ 4.2 V, 85 °C)	$I_S < 0.05 \mu\text{A (typ.)}$
Surface leakage current (@ 18 V, 25 °C)	$I_{SL} < 0.1 \mu\text{A}$
Insulation resistance after reflow soldering (@ 4.2 V, 25 °C)	$R_{IS} > 10 \text{ M}\Omega$
Maximum capacitance (@ 1 MHz, 1 V, 25 °C)	$C_{max} = 15 \text{ pF}$
Typical capacitance (@ 1 MHz, 1 V, 25 °C)	$C_{typ} = 10 \text{ pF}$
Maximum energy absorption (ESD)	$W_{max} = 30 \text{ mJ}$
(@ ESD according to IEC 61000-4-2, 15 kV air discharge)	
Response time	$< 0.5 \text{ ns}$
Operating temperature	$-40 \dots +85 \text{ }^\circ\text{C}$
Storage temperature (mounted parts)	$-40 \dots +125 \text{ }^\circ\text{C}$
Termination material	Ag/Ni/Sn

Stability to multiple ESD discharges



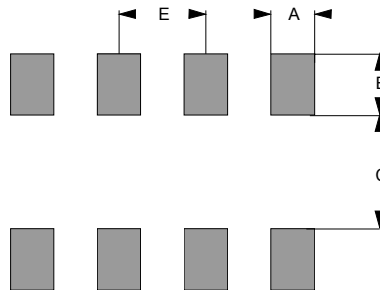
Typical leakage current @ 4.2 V, 25 °C @ multiple ESD discharges (10 pulses of each polarity, contact discharge according to IEC 61000-4-2, voltage up to 25 kV, application on same parts).



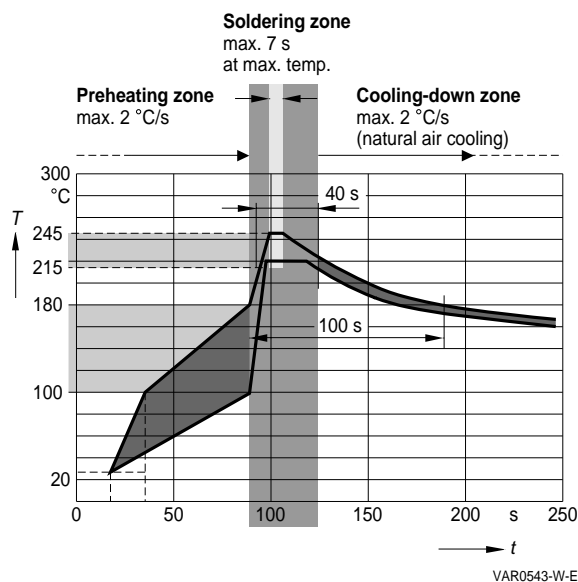
Typical leakage current @ 4.2 V, 25 °C @ multiple ESD discharges (polarity +, 15 kV contact discharge according to IEC 61000-4-2).

Recommended geometry of solder pads

- A = 0.35 mm
- B = 0.9 mm
- C = 0.4 mm
- E = 0.5 mm



Recommended soldering temperature profile



This component is suited for reflow soldering. Maximum reflow cycles: 3 x

As far as possible, the components shall be employed within 12 months. They should be left in their original packings to avoid soldering problems due to oxidized terminals.

Storage temperature: -25 to 45 °C

Relative humidity: < 75% annual average, < 95% on maximum 30 days in a year.

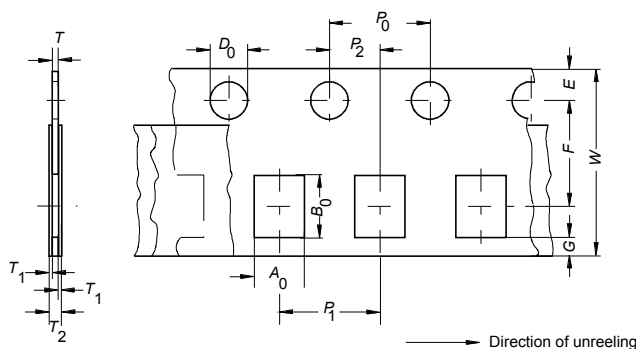
The usage of mild non-activated fluxes for soldering is recommended, as well as proper cleaning of the PCB.

The components are suited for Pb-free soldering.

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Taping according to IEC 60286-3

Tape material: cardboard



Dimensions and tolerances:

Definition	Symbol	Dimension [mm]	Tolerance [mm]
Compartment width	A_0	1.6	± 0.2
Compartment length	B_0	2.4	± 0.2
Sprocket hole diameter	D_0	1.5	$+0.1/-0$
Sprocket hole pitch	P_0	4.0	± 0.1 ¹⁾
Distance center hole to center compartment	P_2	2.0	± 0.05
Pitch of the component compartments	P_1	4.0	± 0.1
Tape width	W	8.0	± 0.3
Distance edge to center of hole	E	1.75	± 0.1
Distance center hole to center compartment	F	3.5	± 0.05
Distance compartment to edge	G	0.75	min.
Overall thickness	T_2	1.12	max.
Thickness tape	T	0.95	± 0.05

¹⁾ $\leq \pm 0.2$ mm over any 10 pitches

Package: 8 mm tape:

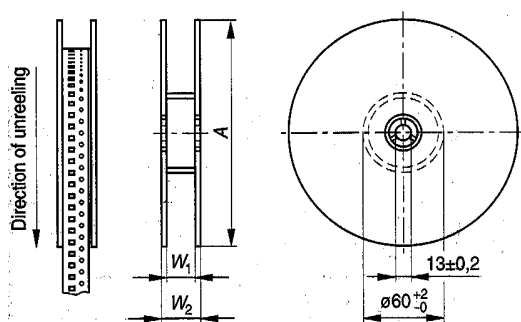
Packing

Each reel in airtight plastic bag with desiccant bag.

Reel material: plastic

Packing unit: 4000 pcs./reel

Reel dimensions:



Definition	Symbol	Dimension [mm]	Tolerance [mm]
Reel diameter	A	180	+0 / -3
Reel width (inside)	W ₁	8.4	+1.5 / -0
Reel width (outside)	W ₂	14.4	max.

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