

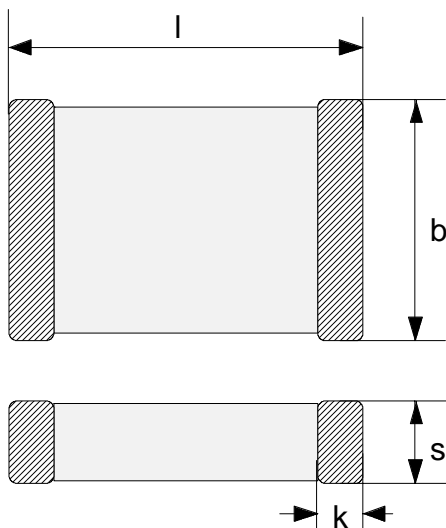
PRELIMINARY DATA SHEET

(parameters may be changed if necessary)

**Designation System**

- CT = Chip with Three-layer-termination
- 0402 = Dimensions of the device 04x02 (Length x width in 1/100 inch)
- L = Tolerance of the varistor voltage ( $\pm 15\%$ )
- 14 = Max. operating voltage
- U = Ultra Low DC Leakage
- G = Taped version, cardboard tape, 7" reel (10000 pcs/reel)

**Figure**



- $l = 1.0 \pm 0.15$
- $b = 0.5 \pm 0.10$
- $s = 0.5 \pm 0.10$
- $k = 0.2 \pm 0.10$

(All dimensions in mm)

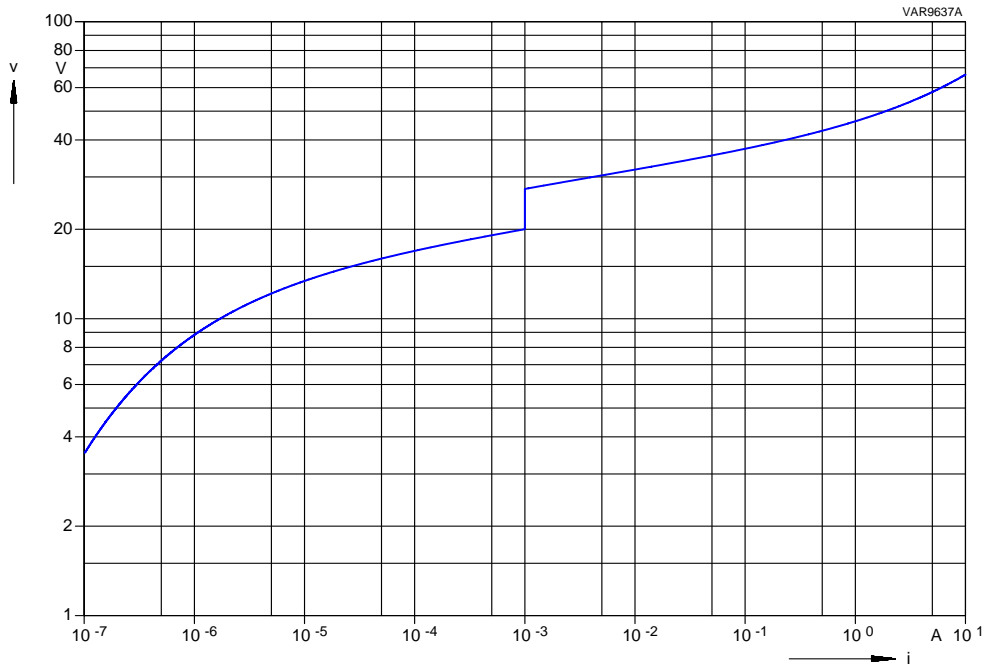
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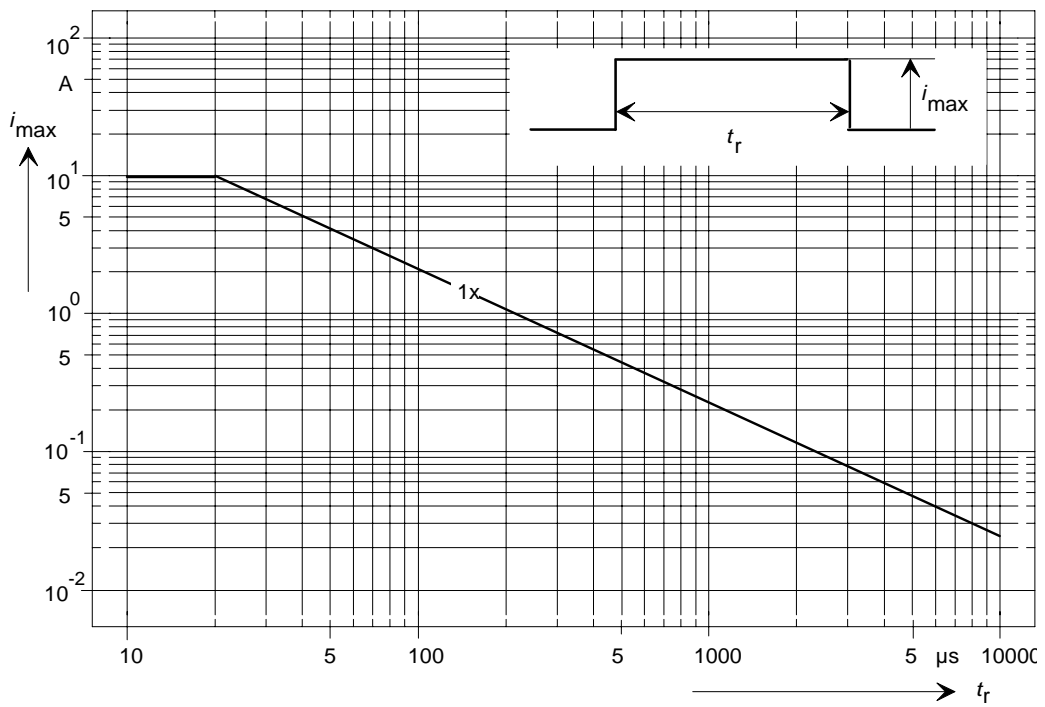
PRELIMINARY DATA SHEET

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**V-I Characteristic**



**Derating Field**





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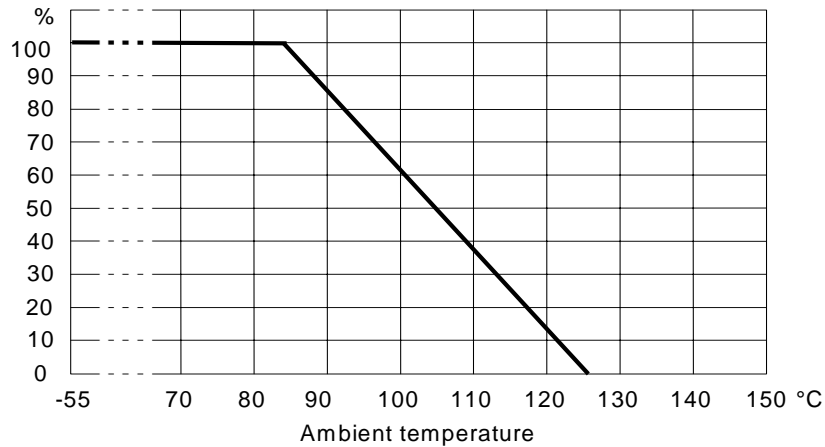
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**Electrical Data**

Max. operating voltage	
RMS voltage	$V_{eff} = 14\text{ V}$
DC voltage	$V_{DC} = 16\text{ V}$
Varistor voltage (@ 1 mA)	$V_V = 20 - 27\text{ V}$
Max. clamping voltage (@ 1 A)	$V_C = 46\text{ V}$
Max. DC leakage current (@3.5V, 25°C)	$I_s = 0.1\mu\text{A}$
Max. average power dissipation	$P_{max} = 3\text{ mW}$
Max. surge current (8/20 $\mu\text{s}$ )	$\hat{I}_{max} = 1 \times 10\text{ A}$
Max. energy absorption (2 ms)	$E_{max} = 1 \times 0.01\text{ J}$
Max. energy absorption (ESD)	$E_{max} = 30\text{mJ}$
(@ ESD acc. IEC61000-4-2, 15kV Air Discharge, 150pF, 330 $\Omega$ )	
Capacitance (@ 1 MHz, 1 V, 25°C; typical)	<b>47 pF</b>
Response time	<b>&lt; 0.5 ns</b>
Operating temperature	<b>-55 ... +85 °C</b>
Storage temperature (mounted parts)	<b>-55 ... +125 °C</b>

**Derating Curve:**

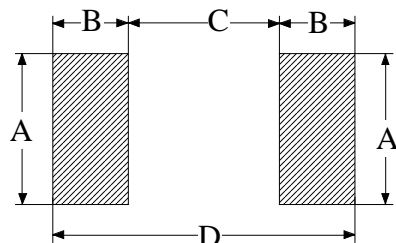
Max. current, energy, operating voltage and average power dissipation depending on ambient temperature



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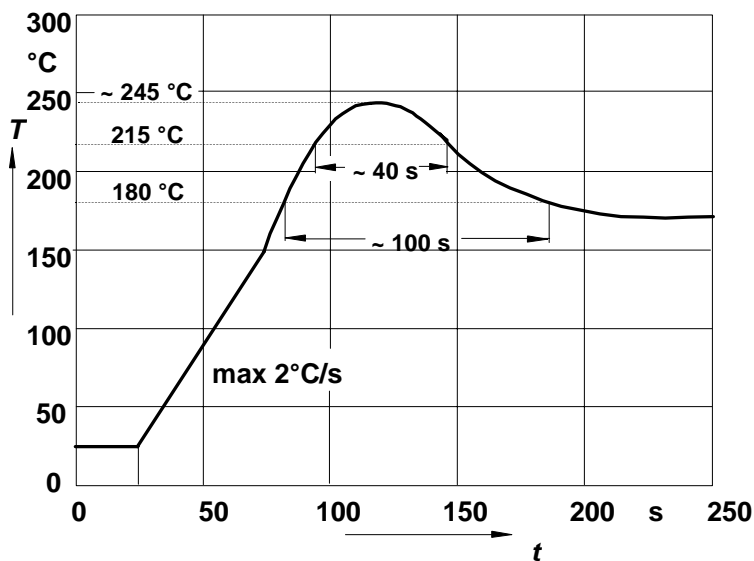
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**Recommended Geometry of Solder Pads**



- A = 0.6 mm
- B = 0.6 mm
- C = 0.5 mm
- D = 1.7 mm

**Recommended Soldering Temperature Profiles**



Max. reflow cycles: 3

The components should be soldered within 12 months after delivery from EPCOS. The parts are to be left in the original packing in order to avoid any soldering problems caused by oxidized terminals.

Storage temperature: -25 to 45°C.

Relative humidity: <75% annual average, <95% on max. 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 to Pb-free soldering.

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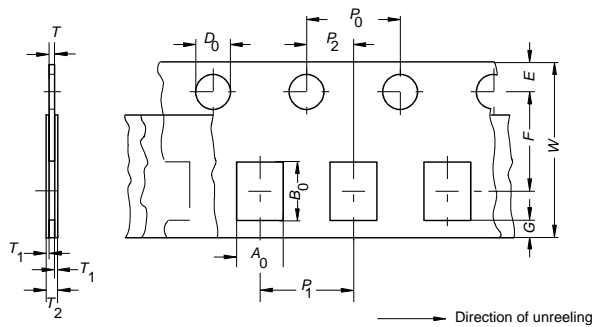
**PRELIMINARY DATA SHEET**

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**Taping according to 60286-3**

Dimensions and tolerances

Tape material: cardboard



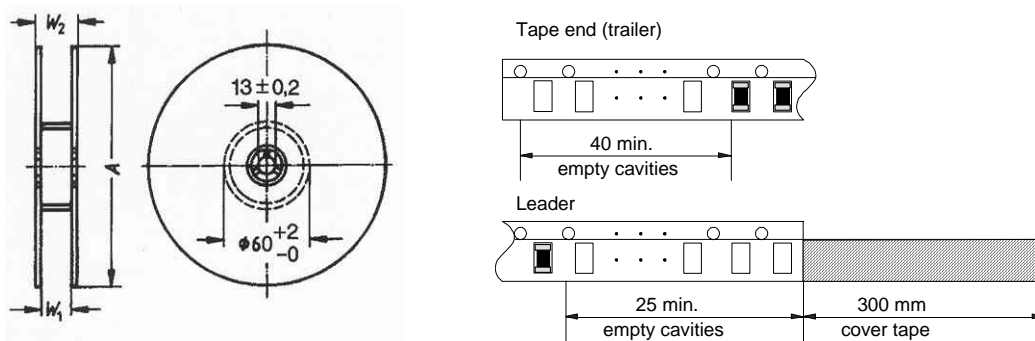
Definition	Symbol	Dim.	Tolerance
Compartment width	$A_0$	0.6	$\pm 0.2$
Compartment length	$B_0$	1.15	$\pm 0.2$
Sprocket hole diameter	$D_0$	1.5	$\pm 0.1$
Sprocket hole pitch	$P_0$	4.0	$\pm 0.1$ <sup>1)</sup>
Distance center hole to center compartment	$P_2$	2.0	$\pm 0.05$
Pitch of the component compartments	$P_1$	2.0	$\pm 0.1$
Tape width	$W$	8.0	$\pm 0.3$
Distance edge to center of hole	$E$	1.75	$\pm 0.1$
Distance center hole to center compartment	$F$	3.5	$\pm 0.05$
Distance compartment to edge	$G$	0.75	min
Thickness of cardboard tape	$T$	0.6	max.
Overall thickness	$T_2$	0.7	max.

<sup>1)</sup>  $\leq \pm 0.2$  mm over any 10 pitches

**PRELIMINARY DATA SHEET**

(parameters may be changed if necessary)

Package 8 mm tape:



Reel material: plastic

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.

## Package

Dimensions approx. 220 x 200 mm. Weight approx. 170 g

6 bags in cardboard box; dimensions approx. 250 x 220 x 130 mm, weight approx. 1 kg.

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