Metal Oxide Varistors

SMD multilayer varistor array with Ni-barrier termination

B72762A2170S160

Designation system

CA = **C**hip **a**rray

04 = Dimensions of the device $\underline{04}$ x 05 (length x width in 1/100 inch)

P = Design (**p**arallel internal structure)

2 = Number of elements

S = Special tolerance of the varistor voltage

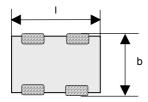
17 = Maximum operating voltage

 $T = \underline{T}$ hree layer terminations

LC = <u>L</u>ow <u>c</u>apacitance

G = Taped version (cardboard tape, 7" reel, 4000 pieces/reel)

Figure



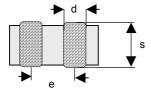
 $I = 1.37 \pm 0.15$

b = 1.0 + 0/ -0.15

s = 0.7 max.

 $d = 0.36 \pm 0.1$

 $e_{RFF} = 0.64$



Coplanarity < 0.1

(all dimensions in mm)

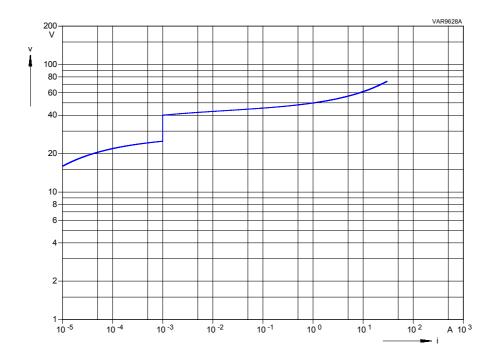
As far as patents or other rights of third parties are concerned, liability is only assumed for components per se, not for applications, processes and circuits implemented within components or assemblies. The information describes the type of component and shall not be considered as assured characteristics. Terms of delivery and rights to change design reserved.

ISSUE DATE 28.01.2005 ISSUE	d	PUBLISHER	KB VS PE	PAGE	1/6
-----------------------------	---	-----------	----------	------	-----

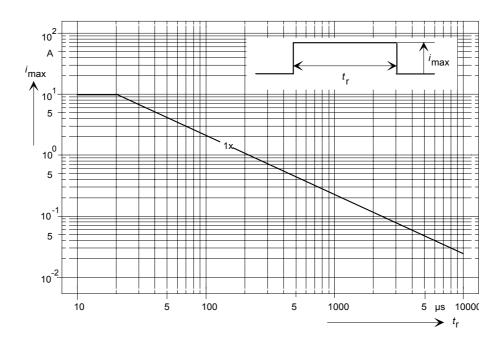
SMD multilayer varistor array with Ni-barrier termination

B72762A2170S160

V-I-characteristic



Derating field



								ı
ISSUE DATE	28.01.2005	ISSUE	d	PUBLISHER	KB VS PE	PAGE	2/6	l
							1	ı



SMD multilayer varistor array with Ni-barrier termination

B72762A2170S160

Electrical data

Maximum operating voltage

RMS voltage $V_{RMS} = 17 \text{ V}$ DC voltage $V_{DC} = 22 \text{ V}$

Varistor voltage (@ 1 mA) $V_V = 25 \text{ up to } 40 \text{ V}$

Maximum clamping voltage (@ 1 A) $V_C = 50 \text{ V}$ Maximum average power dissipation $P_{max} = 3 \text{ mW}$ Maximum surge current (8/20 µs) $I_{max} = 1 \times 10 \text{ A}$ Maximum energy absorption (2 ms) $E_{max} = 1 \times 0.01 \text{ J}$

Capacitance (@ 1 MHz, 0.5 V) < **75 pF**Response time < **0.5 ns**

Operating temperature —30 ... +85 °C
Storage temperature (mounted parts) —40 ... +125 °C

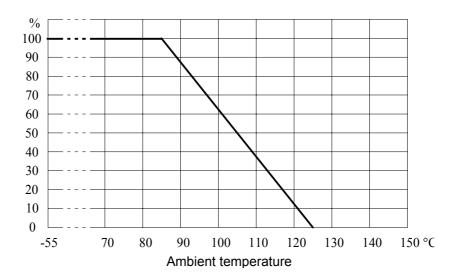
Termination material Ag/Ni/Sn

(thickness not specified, adjusted to fulfill wettability specification according to

DIN IEC 68-2-58)

Part weight 0.004 g

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



ISSUE DATE 28.01.2005	ISSUE	d	PUBLISHER	KB VS PE	PAGE	3/6	
-----------------------	-------	---	-----------	----------	------	-----	--



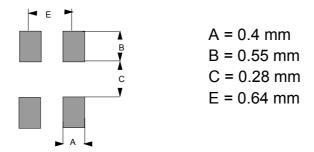


Metal Oxide Varistors

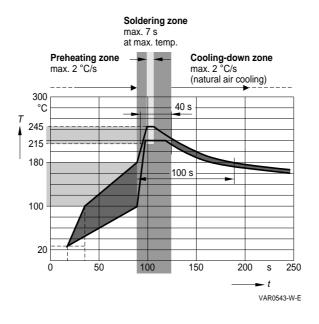
SMD multilayer varistor array with Ni-barrier termination

B72762A2170S160

Recommended geometry of solder pad



Recommended soldering temperature profile



This component is suited for reflow soldering. Maximum reflow cycles: 2 x

As far as possible, the components shall be employed within 6 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.

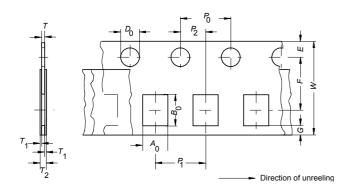
ISSUE DATE	28.01.2005 ISSUE	d	PUBLISHER	KB VS PE	PAGE	4/6	
------------	------------------	---	-----------	----------	------	-----	--

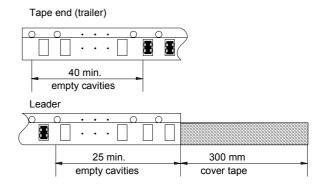
SMD multilayer varistor array with Ni-barrier termination

B72762A2170S160

Taping according to IEC 60286-3

Tape material: cardboard





Dimensions and tolerances:

Definition	Symbol	Dimension	Tolerance
		[mm]	[mm]
Compartment width	A_0	1.05	± 0.05
Compartment length	B_0	1.57	± 0.05
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	Е	1.75	± 0.1
Distance center hole to center compartment	F	3.5	± 0.05
Distance compartment to edge	G	0.75	min.
Thickness of cardboard tape	Т	0.75	± 0.2
Overall thickness	T_2	0.9	max.

 $^{^{1)} \}le \pm 0.2$ mm over any 10 pitches

ISS	SUE DATE	28.01.2005	ISSUE	d	PUBLISHER	KB VS PE	PAGE	5/6	
-----	----------	------------	-------	---	-----------	----------	------	-----	--



Metal Oxide Varistors

CA04P2S17TLCG

SMD multilayer varistor array with Ni-barrier termination

B72762A2170S160

Packing

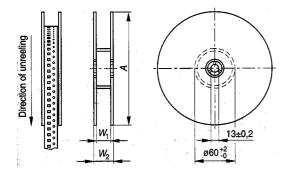
Each reel in airtight plastic bag with desiccant bag.

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

Package: 8 mm tape

Reel material: plastic

Reel dimensions:



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

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

IS	SUE DATE	28.01.2005	ISSUE	d	PUBLISHER	KB VS PE	PAGE	6/6	
----	----------	------------	-------	---	-----------	----------	------	-----	--

[©] EPCOS AG 2005. Reproduction, publication and dissemination of this data sheet, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.