



Metal Oxide Varistor	Disc type
SIOV- S07K14AUTOGD1	Ordering code: B72207S1140K111

Data sheet

Form: FBLE3K/b

File name:S07K14AUTOGD1_d.doc

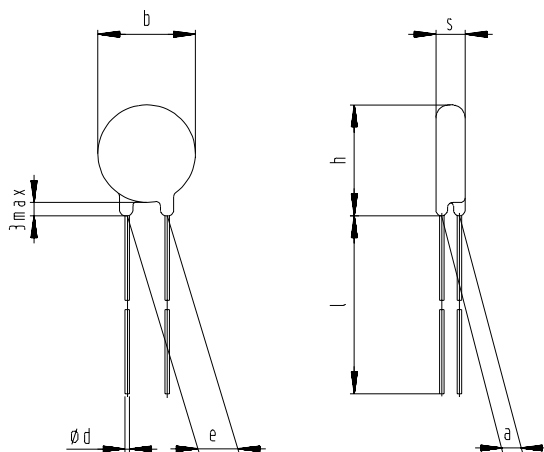
MODIFICATIONS: New datasheet layout
Text for symbol 'H' changed in tape dimensions table

REMARKS:

Prepared by	Collins-Hunt	Release	signed: PE / Collins-Hunt		signed: QS / Zödl		
			signed:		signed:		
ISSUE DATE	03.04.03	ISSUE	d	PUBLISHER	KH PE VAR	PAGE	0/6

Data sheet
SIOV nomenclature:

S	=	Disk type	
07	=	Rated disc diameter	
K	=	Tolerance of V_V at 1mA: $\pm 10\%$	
14	=	Max. AC voltage	
AUTO	=	High energy absorption ("Load Dump")	
G	=	Taping in accordance with DIN IEC 60286-2	
D1	=	High-temperature coating	
		Operating temperature range:	-40°C ... +125°C
		Storage temperature range:	-40°C ... +150°C

Figure: Dimensions given in Millimeters (mm)


b_{max}	=	9,0
h_{max}	=	10,5
s_{max}	=	3,6
e	=	$5,0 + 0,6 / - 0,1$ ¹⁾
a	=	$1,3 \pm 1,0$
l	=	n.a.
$\varnothing d$	=	$0,6 \pm 0,05$

¹⁾ measured above carrier tape

Electrical data:
Maximum ratings (125°C)

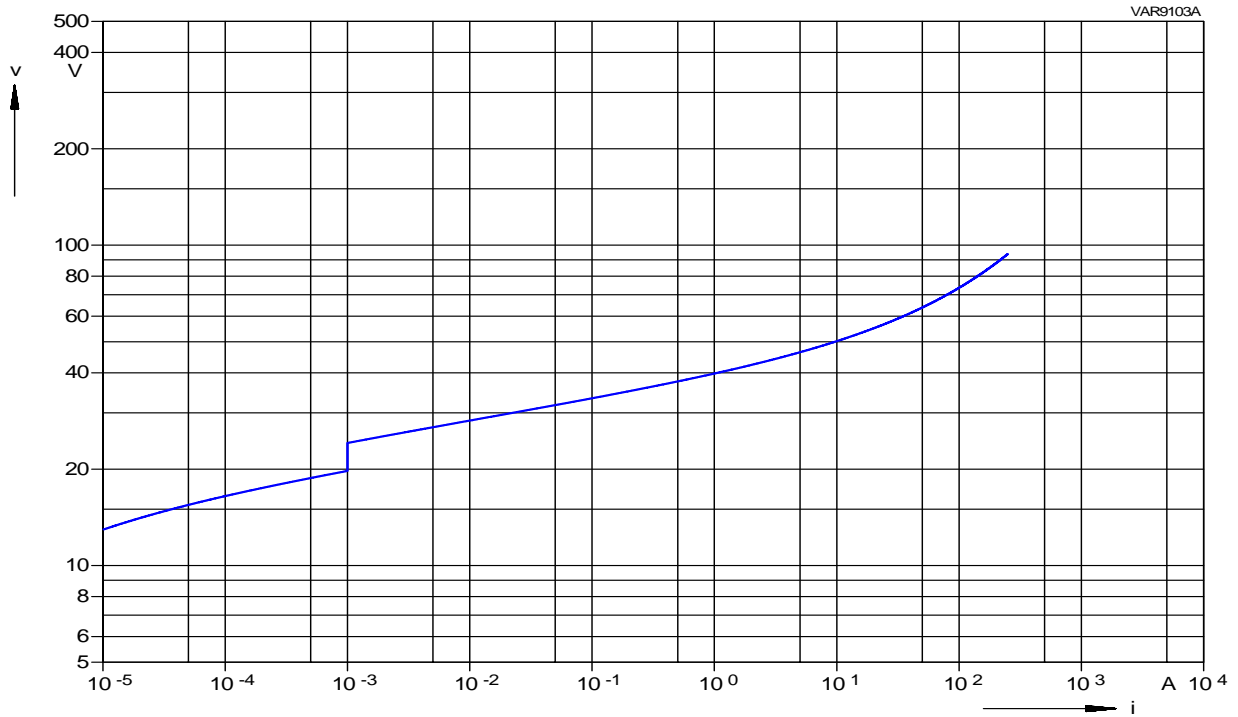
Max. operating AC voltage	V_{RMS}	=	14V
Max. operating DC voltage	V_{DC}	=	16V
Surge current (8/20µs), 1 time	I_{max}	=	250A
Load Dump (10 times, 60s interval)	W_{LD}	=	12J

Characteristics (25°C)

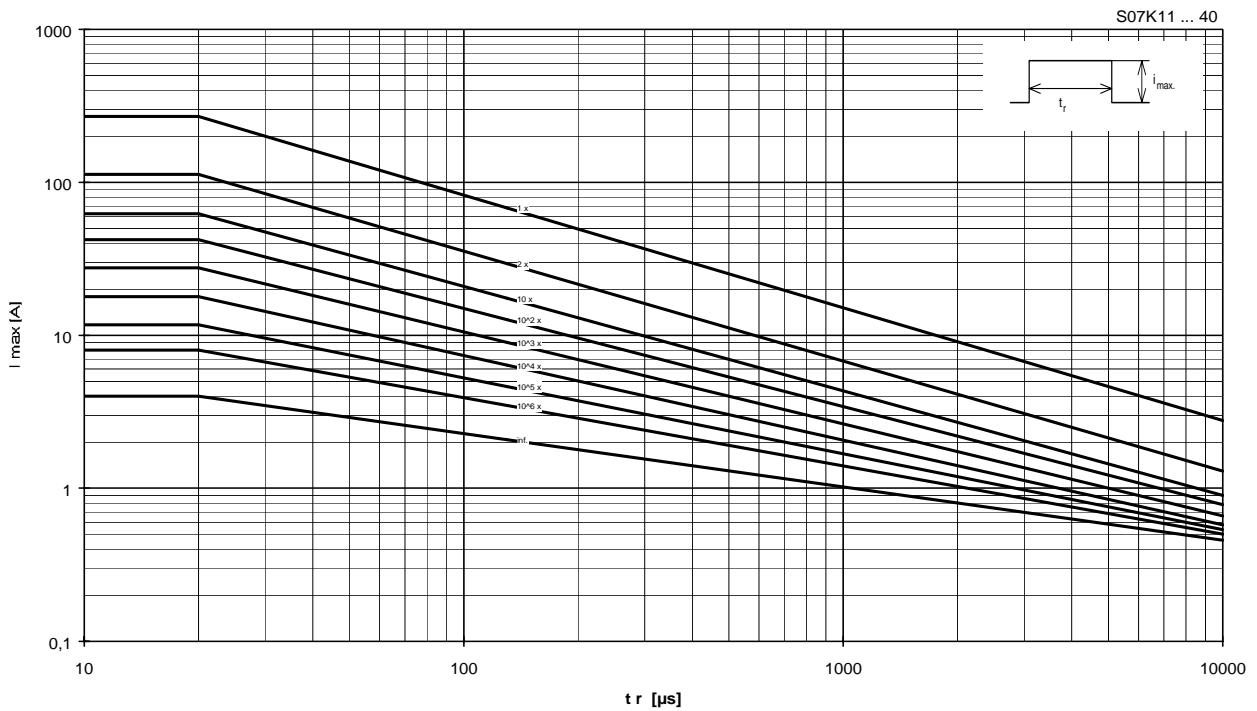
Varistor voltage at 1mA	V_V	=	$22V \pm 10\%$
Clamping voltage at 2,5A (8/20µs)	$V_{C,max}$	=	43V
Typ. capacitance at 1 kHz	C	=	2300pF
Jump Start (max. duration 5minutes)	V_{JUMP}	=	25V

Data sheet

V/I Characteristic:



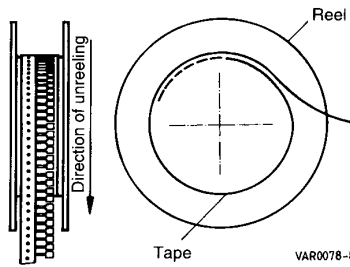
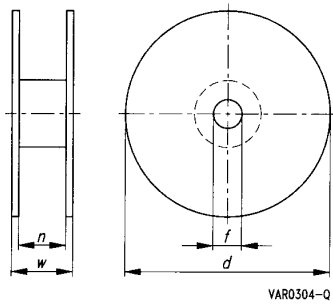
Derating:



Data sheet

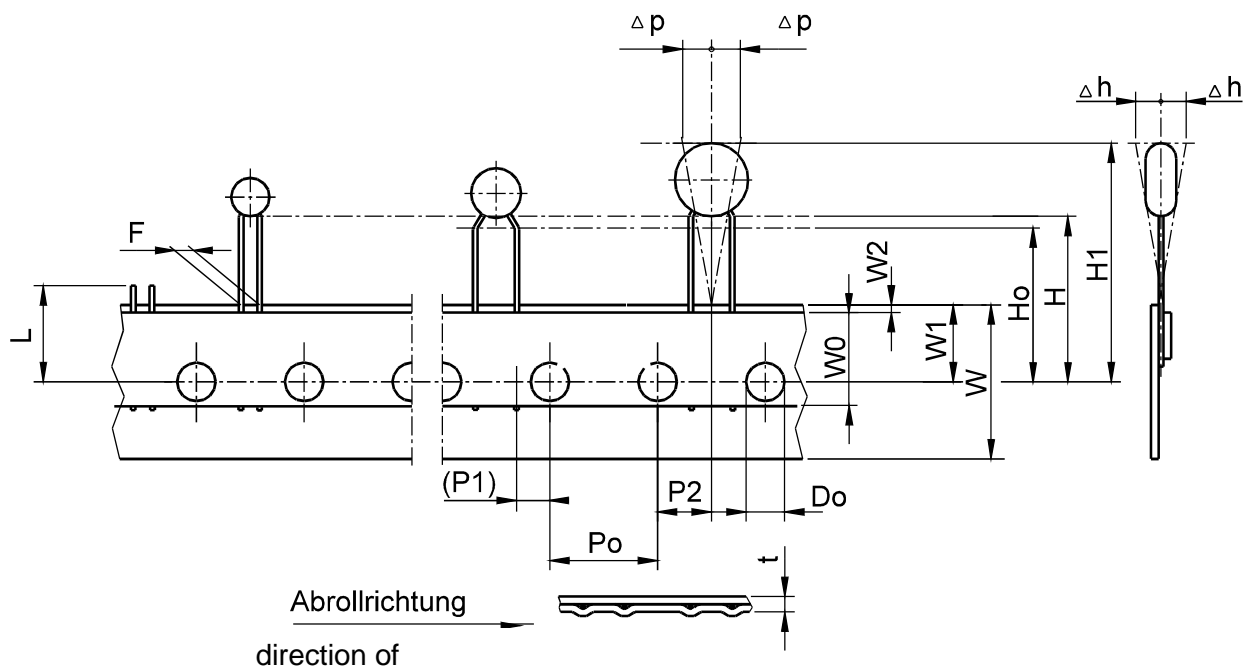
Taping:

Package Unit: 1500 pcs./reel



- d_{max} = 360mm
- w_{max} = 52mm
- f = $31 \pm 1,0$ mm
- n = 46mm (typ.)

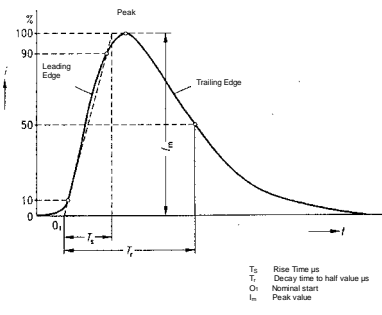
Lead spacing 5,0mm



Data sheet
Tape dimensions, in Millimeters (mm):

Definition	Symbol	Dimension	Tolerance	Remarks
Body diameter	b	9,0	max	
Body thickness	s	3,6	max	
Lead diameter	d	0,6	$\pm 0,05$	
Sprocket hole pitch	P_0	12,7	$\pm 0,3$	$\pm 1\text{mm}/20$ sprocket holes
Lead spacing	F	5,0	$+0,6/-0,1$	measured above carrier tape
Component deviation	Δh	0	$\pm 2,0$	measured at top of component body
Component deviation	Δp	0	$\pm 1,3$	measured at top of component body
Carrier tape width	W	18,0	$\pm 0,5$	
Adhesive tape width	W_0	5,5	min	Peel-off force $\geq 5\text{N}$
Sprocket hole position	W_1	9,0	$\pm 0,5$	
Adhesive tape position	W_2	3,0	max	
Distance hole centre to the top of the component	H_1	32,2	max	
Distance hole centre to the bottom plane of the component body	H	18,0	$+2/-0$	
Hole diameter	D_0	4,0	$\pm 0,2$	
Total tape thickness	t	0,9	max	
Lead overlap	l	4,0	max	
Cutting level	L	11,0	max	

Data sheet
Reliability Data:

	Characteristics	Test Methods/Description	Specifications
E L E C T R I C A L	Varistor Voltage	The voltage between two terminals with the specified measuring current applied is called V_V (1 mA _{DC} @ 0.2 - 2 s).	To meet the specified value.
	Clamping Voltage	The maximum voltage between two terminals with the specified standard impulse current (8/20µs) illustrated below applied. 	To meet the specified value.
	Surge current derating, 8/20 µs	100 surge currents (8/20 µs), unipolar, interval 30 s, amplitude corresponding to derating curve for 20 µs	$ \Delta V/V (1 \text{ mA}) \leq 10\%$ (measured in direction of surge current) No visible damage
	Surge current derating, 2 ms	100 surge currents (2ms), unipolar, interval 120s, amplitude corresponding to derating curve for 2ms	$ \Delta V/V (1 \text{ mA}) \leq 10\%$ (measured in direction of surge current) No visible damage
	Load dump	See maximum ratings	$ \Delta V/V (1 \text{ mA}) \leq 15\%$ (measured in direction of surge current) No visible damage
	Jump start	See maximum ratings	$ \Delta V/V (1 \text{ mA}) \leq 15\%$ (measured in direction of surge current) No visible damage

Data sheet

	Characteristics	Test Methods/Description	Specifications
M E C H A N I C A L	Solderability	IEC 60068-2-20 test Ta, method 1, 235 °C, 5s	Solderable upon delivery and after 6 months storage.
	Resistance to soldering heat	IEC 60068-2-20, test Tb, method 1A; 260 °C, 10 s	$ \Delta V/V (1 \text{ mA}) \leq 5 \%$ No visible damage
	Electric strength	$\geq 2,5 \text{ kV}_{\text{RMS}}$ (not D1)	in accordance with CECC 42 000
E N V I R O N M	Max. DC operating voltage	MIL-STD-202F, Method 108A; UCT, V_{DC} , 1000 h	$ \Delta V/V (1 \text{ mA}) ^{(1)} \leq 10\%$ No visible damage
	Damp heat, steady state	Based on IEC 60068-2-3, 85 °C, 85 % r.h., V_{DC} , 1000 h	$ \Delta V/V (1 \text{ mA}) ^{(1)} \leq 10\%$ No visible damage
	Fast temperature cycling	IEC 60068-2-14, test Na, dwell time 15 min -40 °C/ +85 °C, 100 cycles: SIOV-S...AUTO -40 °C/ +125 °C 1000 cycles: SIOV-S...AUTO D1	$ \Delta V/V (1 \text{ mA}) ^{(1)} \leq 10\%$ No visible damage
E N T A L	Climatic category	40/85/56 (D1: 40/125/56) LCT - 40 °C UCT + 85 °C (D1: +125 °C) 56 days	in accordance with IEC 60068-1

Note: More details can be found in the data book 'SIOV Metal Oxide Varistors', Ordering No. EPC: 62002-7600

© EPCOS AG 2002. Reproduction, publication and dissemination of this data sheet, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.

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.

ISSUE DATE	03.04.03	ISSUE	d	PUBLISHER	KH PE VAR	PAGE	6/6
------------	----------	-------	---	-----------	-----------	------	-----