

Leaded Varistors

SuperioR Series

Construction

- Round varistor element, leaded
- Coating: epoxy resin, flame-retardant to UL 94 V-0
- Terminals: tinned copper wire

Features

- High-energy SuperioR series E3
- Very high surge current ratings of 12 kA
- High energy ratings up to 320 J
- PSpice models

Approvals

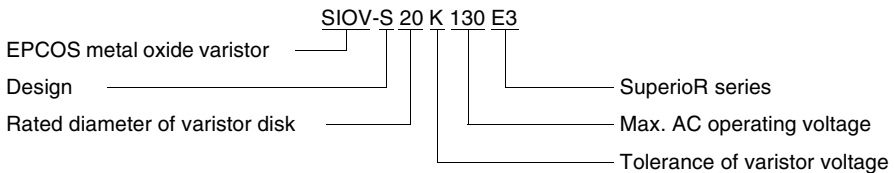
- UL, CSA (all types $\geq$ K115)
- CECC

Taping

- For ordering information see page 206 ff, chapter “Leaded Varistors: Taping”

Type designation

Detailed description of coding system on page 39, chapter “General Technical Information”



General technical data

Climatic category	40/85/56	in accordance with IEC 60068-1
LCT	– 40 °C	
UCT	+ 85 °C	
Damp heat, steady state (93 % r.h., 40 °C)	56 days	in accordance with IEC 60068-2-3
Operating temperature	– 40 ... + 85 °C	in accordance with CECC 42 000
Storage temperature	– 40 ... + 125 °C	
Electric strength	$\geq 2,5 \text{ kV}_{\text{RMS}}$	in accordance with CECC 42 000
Insulation resistance	$\geq 10 \text{ M}\Omega$	in accordance with CECC 42 000
Response time	< 25 ns	



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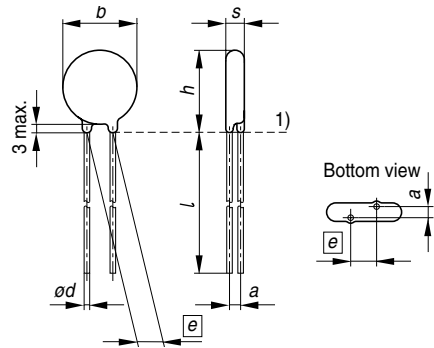
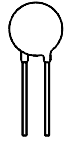
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Maximum ratings ($T_A = 85\text{ °C}$)

Type (untaped) SIOV-	Ordering code	V_{RMS} V	V_{DC} V	i_{max} 8/20 μs A	W_{max} (2 ms) J	P_{max} W
S20K115E3	B72220S3111K101	115	150	12000	110	1,0
S20K130E3	B72220S3131K101	130	170	12000	130	1,0
S20K140E3	B72220S3141K101	140	180	12000	140	1,0
S20K150E3	B72220S3151K101	150	200	12000	150	1,0
S20K175E3	B72220S3171K101	175	225	12000	180	1,0
S20K210E3	B72220S3211K101	210	270	12000	210	1,0
S20K230E3	B72220S3231K101	230	300	12000	220	1,0
S20K250E3	B72220S3251K101	250	320	12000	250	1,0
S20K275E3	B72220S3271K101	275	350	12000	260	1,0
S20K300E3	B72220S3301K101	300	385	12000	290	1,0
S20K320E3	B72220S3321K101	320	420	12000	320	1,0

Characteristics ($T_A = 25\text{ °C}$)

Type (untaped) SIOV-	V_V (1 mA) V	ΔV_V (1 mA) %	Max. clamping voltage v V		C_{typ} (1 kHz) pF	Derating curve Page	V/I char- acteristic Page
S20K115E3	180	± 10	300	100	1520	257	278
S20K130E3	205	± 10	340	100	1340	257	278
S20K140E3	220	± 10	360	100	1240	257	278
S20K150E3	240	± 10	395	100	1160	257	278
S20K175E3	270	± 10	455	100	1000	257	278
S20K210E3	330	± 10	550	100	830	257	278
S20K230E3	360	± 10	595	100	760	257	278
S20K250E3	390	± 10	650	100	700	257	278
S20K275E3	430	± 10	710	100	630	257	278
S20K300E3	470	± 10	775	100	580	257	278
S20K320E3	510	± 10	840	100	540	257	278



1) Seating plane according to IEC 60717

VAR0408-C

Dimensions

Type	$e \pm 1$ mm	$a \pm 1$ mm	$b_{\max}$ mm	$s_{\max}$ mm	$h_{\max}$ mm	$l_{\min}$ mm	$d \pm 0,05$ mm
SIOV-S20K115E3	10,0	1,8	22,5	4,8	26,0	30,0	1,0
SIOV-S20K130E3	10,0	2,0	22,5	5,0	26,0	30,0	1,0
SIOV-S20K140E3	10,0	2,1	22,5	5,1	26,0	30,0	1,0
SIOV-S20K150E3	10,0	2,2	22,5	5,2	26,0	30,0	1,0
SIOV-S20K175E3	10,0	2,3	22,5	5,3	26,0	30,0	1,0
SIOV-S20K210E3	10,0	2,4	22,5	5,4	26,0	30,0	1,0
SIOV-S20K230E3	10,0	2,9	22,5	5,9	26,0	30,0	1,0
SIOV-S20K250E3	10,0	3,1	22,5	6,1	27,0	30,0	1,0
SIOV-S20K275E3	10,0	3,3	22,5	6,3	27,0	30,0	1,0
SIOV-S20K300E3	10,0	3,6	22,5	6,6	27,0	30,0	1,0
SIOV-S20K320E3	10,0	3,8	22,5	6,8	27,0	30,0	1,0

Weight

Size	approx.	
S20K115 ... 320E3	4,0 ... 7,0 g	The weight of varistors in between these voltage classes can be interpolated.

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