

Block Varistors

HighE Series

Construction

- Disk-shaped varistor element, potted in plastic housing
- Housing and potting flame-retardant to UL 94 V-0
- Screw terminals M4 (SIOV-B32 ... 40)
Screw terminals M5 (SIOV-B60 ... 80)

Features

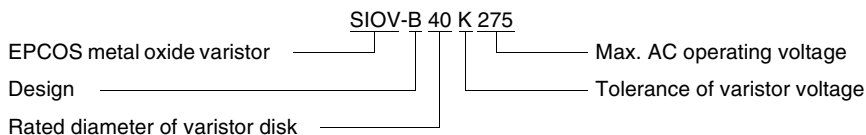
- Heavy-duty varistors (surge current capability up to 100 kA)
- Wide product range
- SIOV-B40 also available without housing (LS40 series)
- PSpice models

Approvals

- UL
- CSA (\geq K130)
- SEV (except SIOV-B80)

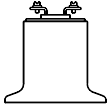
Type designation

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 ... + 110 °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	
Max. torque		
B32/B40	1,0 Nm	
B60/B80	2,5 Nm	



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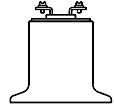
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Maximum ratings ($T_A = 85\text{ °C}$)

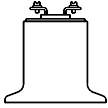
Type	Ordering code	V_{RMS}	V_{DC}	i_{max} 8/20 μ s A	W_{max} (2 ms) J	P_{max} W
SIOV-		V	V			
B40K75	B72240B0750K001	75	100	25000	190	1,4
B32K130	B72232B0131K001	130	170	25000	210	1,2
B40K130	B72240B0131K001	130	170	40000	310	1,4
B60K130	B72260B0131K001	130	170	70000	490	1,6
B80K130	B72280B0131K001	130	170	100000	660	2,0
B32K150	B72232B0151K001	150	200	25000	240	1,2
B40K150	B72240B0151K001	150	200	40000	360	1,4
B60K150	B72260B0151K001	150	200	70000	570	1,6
B80K150	B72280B0151K001	150	200	100000	800	2,0
B32K230	B72232B0231K001	230	300	25000	300	1,2
B40K230	B72240B0231K001	230	300	40000	460	1,4
B60K230	B72260B0231K001	230	300	70000	730	1,6
B80K230	B72280B0231K001	230	300	100000	1200	2,0
B32K250	B72232B0251K001	250	320	25000	330	1,2
B40K250	B72240B0251K001	250	320	40000	490	1,4
B60K250	B72260B0251K001	250	320	70000	800	1,6
B80K250	B72280B0251K001	250	320	100000	1300	2,0
B32K275	B72232B0271K001	275	350	25000	360	1,2
B40K275	B72240B0271K001	275	350	40000	550	1,4
B60K275	B72260B0271K001	275	350	70000	860	1,6
B80K275	B72280B0271K001	275	350	100000	1400	2,0
B32K320	B72232B0321K001	320	420	25000	430	1,2
B40K320	B72240B0321K001	320	420	40000	640	1,4
B60K320	B72260B0321K001	320	420	70000	1000	1,6
B80K320	B72280B0321K001	320	420	100000	1600	2,0
B32K385	B72232B0381K001	385	505	25000	550	1,2
B40K385	B72240B0381K001	385	505	40000	800	1,4
B60K385	B72260B0381K001	385	505	70000	1200	1,6
B80K385	B72280B0381K001	385	505	100000	2000	2,0

Varistor elements without plastic housing (suitable for soldering) are available upon request.

Designations: SIOV-D32K ... K6 SIOV-D60K ... K6
 SIOV-D40K ... QK6 SIOV-D80K ... K6


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

Type	V_V (1 mA) V	ΔV_V (1 mA) %	Max. clamping voltage		C_{typ} (1 kHz) pF	Derating curve Page	V/I char- acteristic Page
			v V	i A			
B40K75	120	± 10	220	300	11000	259	282
B32K130	205	± 10	340	200	4400	259	281
B40K130	205	± 10	340	300	5600	260	282
B60K130	205	± 10	340	500	15000	262	283
B80K130	205	± 10	340	800	28000	264	285
B32K150	240	± 10	395	200	3700	259	281
B40K150	240	± 10	395	300	4800	260	282
B60K150	240	± 10	395	500	12000	262	283
B80K150	240	± 10	395	800	23000	264	285
B32K230	360	± 10	595	200	2500	259	281
B40K230	360	± 10	595	300	3200	261	282
B60K230	360	± 10	595	500	7900	263	283
B80K230	360	± 10	595	800	16000	264	285
B32K250	390	± 10	650	200	2200	259	281
B40K250	390	± 10	650	300	2900	261	282
B60K250	390	± 10	650	500	7100	263	283
B80K250	390	± 10	650	800	14000	264	285
B32K275	430	± 10	710	200	2000	259	281
B40K275	430	± 10	710	300	2700	261	282
B60K275	430	± 10	710	500	6600	263	283
B80K275	430	± 10	710	800	13000	264	285
B32K320	510	± 10	840	200	1700	259	281
B40K320	510	± 10	840	300	2300	261	282
B60K320	510	± 10	840	500	5600	263	283
B80K320	510	± 10	840	800	11000	264	285
B32K385	620	± 10	1025	200	1400	259	281
B40K385	620	± 10	1025	300	1900	261	282
B60K385	620	± 10	1025	500	4600	263	283
B80K385	620	± 10	1025	800	9000	264	285



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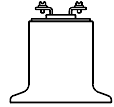
Maximum ratings ($T_A = 85\text{ °C}$)

Type	Ordering code	V_{RMS} V	V_{DC} V	i_{max} 8/20 μ s A	W_{max} (2 ms) J	P_{max} W
SIOV-						
B32K420	B72232B0421K001	420	560	25000	600	1,2
B40K420	B72240B0421K001	420	560	40000	910	1,4
B60K420	B72260B0421K001	420	560	70000	1500	1,6
B80K420	B72280B0421K001	420	560	100000	2200	2,0
B32K440	B72232B0441K001	440	585	25000	630	1,2
B40K440	B72240B0441K001	440	585	40000	950	1,4
B60K440	B72260B0441K001	440	585	70000	1580	1,6
B80K440	B72280B0441K001	440	585	100000	2350	2,0
B32K460	B72232B0461K001	460	615	25000	660	1,2
B40K460	B72240B0461K001	460	615	40000	1000	1,4
B60K460	B72260B0461K001	460	615	70000	1650	1,6
B80K460	B72280B0461K001	460	615	100000	2500	2,0
B32K550	B72232B0551K001	550	745	25000	620	1,2
B40K550	B72240B0551K001	550	745	40000	960	1,4
B60K550	B72260B0551K001	550	745	70000	1500	1,6
B80K550	B72280B0551K001	550	745	100000	3100	2,0
B32K680	B72232B0681K001	680	895	25000	760	1,2
B40K680	B72240B0681K001	680	895	40000	1100	1,4
B60K680	B72260B0681K001	680	895	70000	1800	1,6
B80K680	B72280B0681K001	680	895	100000	3600	2,0
B32K750	B72232B0751K001	750	970	25000	800	1,2
B40K750	B72240B0751K001	750	970	40000	1200	1,4
B60K750	B72260B0751K001	750	970	70000	2000	1,6
B80K750	B72280B0751K001	750	970	100000	4000	2,0
B60K1000 ¹⁾	B72260B0102K001	1100	1465	70000	3000	1,6
B80K1100	B72280B0112K001	1100	1465	100000	6000	2,0

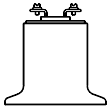
Varistor elements without plastic housing (suitable for soldering) are available upon request.

Designations: SIOV-D32K ... K6 SIOV-D60K ... K6
 SIOV-D40K ... QK6 SIOV-D80K ... K6

1) Operating voltage differs from type designation


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

Type	V_V (1 mA) V	ΔV_V (1 mA) %	Max. clamping voltage		C_{typ} (1 kHz) pF	Derating curve Page	V/I char- acteristic Page
			v V	i A			
B32K420	680	± 10	1120	200	1300	259	281
B40K420	680	± 10	1120	300	1800	261	282
B60K420	680	± 10	1120	500	4300	263	283
B80K420	680	± 10	1120	800	8500	264	285
B32K440	715	± 10	1180	200	1250	259	281
B40K440	715	± 10	1180	300	1700	261	282
B60K440	715	± 10	1180	500	4100	263	283
B80K440	715	± 10	1180	800	8100	264	285
B32K460	750	± 10	1240	200	1200	259	281
B40K460	750	± 10	1240	300	1600	261	282
B60K460	750	± 10	1240	500	3900	263	283
B80K460	750	± 10	1240	800	7700	264	285
B32K550	910	± 10	1500	200	1000	260	281
B40K550	910	± 10	1500	300	1400	261	282
B60K550	910	± 10	1500	500	3300	263	283
B80K550	910	± 10	1500	800	6500	264	285
B32K680	1100	± 10	1815	200	830	260	281
B40K680	1100	± 10	1815	300	1100	261	282
B60K680	1100	± 10	1815	500	2600	263	283
B80K680	1100	± 10	1815	800	5200	264	285
B32K750	1200	± 10	2000	200	800	260	281
B40K750	1200	± 10	2000	300	1000	261	282
B60K750	1200	± 10	2000	500	2400	263	283
B80K750	1200	± 10	2000	800	4800	264	285
B60K1000	1800	± 10	2970	500	1600	263	283
B80K1100	1800	± 10	2970	800	3200	264	285

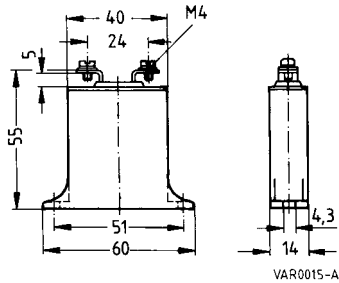


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Dimensions

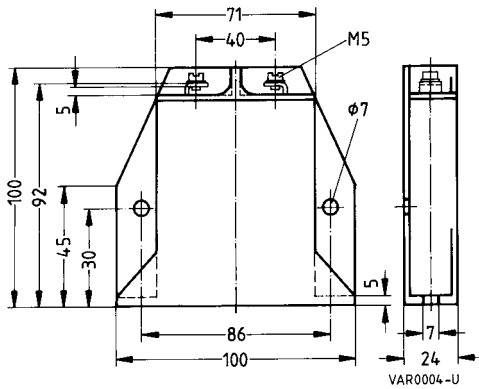
SIOV-B32/-B40



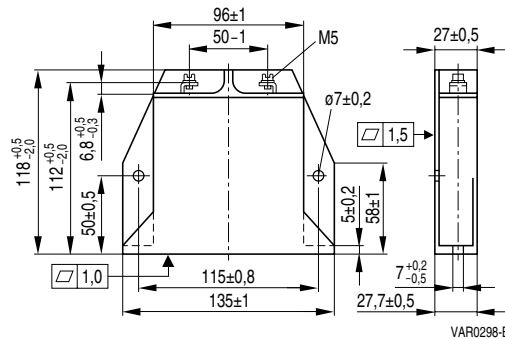
Weight

Size	approx.
B32	45 g
B40	50 g
B60	250 g
B80	650 g

SIOV-B60



SIOV-B80



Dimensions in mm