

SIOV Metal Oxide Varistors

SMD Varistors (Automotive; MLV Series)



Automotive

Construction

- Multilayer technology
- Termination: nickel barrier or silver palladium
- No plastic or epoxy packaging assures better than UL 94 V-0 flammability rating

Features

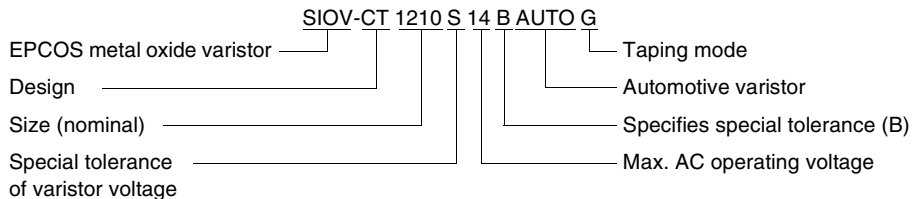
- Sizes 0603 ... 2220
- High energy absorption, particularly in case of load dump
- Stable protection level, minimum leakage current
- High resistance to cyclic temperature stress
- Wide range of operating temperature
- Low inductance (suitable for ESD protection)
- PSpice models
- Bidirectional clamping

Taping

- Supply on 8/12-mm tape, for tape dimensions [see page 155](#), for reel dimensions and packing units [see page 157](#)

Type designation

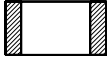
Detailed description of coding system [on page 39](#)



General technical data

Climatic category	55/125/56	in accordance with IEC 60068-1
LCT	– 55 °C	
UCT	+ 125 °C	
Damp heat, steady state (93 % r.h., 40 °C)	56 days	in accordance with IEC 60068-2-3
Operating temperature	– 55 ... + 125 °C	in accordance with CECC 42 000
Storage temperature ¹⁾	– 55 ... + 150 °C	
Response time	< 0,5 ns	
Solderability	235 °C, 2 s	in accordance with IEC 60068-2-58
Resistance to soldering heat	260 °C, 10 s	in accordance with IEC 60068-2-58

1) for mounted parts (storage conditions for unused parts on reel see [page 38](#) [1.12.4])


SIOV Metal Oxide Varistors
Automotive – Nickel Barrier Termination (availability upon request)
Maximum ratings ($T_A = 125\text{ °C}$)

Type	Ordering code	V_{RMS} V	V_{DC} ^① V	i_{max} ^② 8/20 μ s A	W_{max} ^③ (2 ms) J	P_{max} W	W_{LD} (10x) J
SIOV-	NEW						
12-V supply systems							
CT0603S14BAUTOG	B72500-T1140-S260	14	16	30	0,2	0,003	—
CT0805S14BAUTOG	B72510-T1140-S262	14	16	120	0,3	0,008	1,0
CT1206S14BAUTOG	B72520-T1140-S262	14	16	200	0,6	0,008	1,5
CT1210S14BAUTOG	B72530-T1140-S262	14	16	400	1,6	0,010	3,0
CT1812S14BAUTOG	B72580-T1140-S262	14	16	800	2,4	0,015	6,0
CT2220S14BAUTOG	B72540-T1140-S262	14	16	1200	5,8	0,030	12,0
CT2220S14BAUTOE2G2	B72540-T3140-S272	14	16	1200	5,8	0,030	25,0
24-V supply systems							
CT2220K25AUTOE2G2	B72540-T3250-K072	25	31	1200	9,6	0,030	25,0
CT2220K30AUTOG	B72540-T1300-K062	30	34	1200	12,0	0,030	12,0
CT2220K30AUTOE2G2	B72540-T3300-K072	30	34	1200	12,0	0,030	25,0

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

Type	V_{Jump} (5 min) V	V_V ^④ (1 mA) V	ΔV_V (1 mA) %	Max. clamping voltage		C_{typ} (1 kHz) nF	L_{typ} nH	Der. curve Page	V/I char. Page
				v V	i A				
12-V supply systems									
CT0603S14BAUTOG	24,5	22	+23/-0	42	1,0	0,12	1,0	238	276
CT0805S14BAUTOG	24,5	22	+23/-0	42	1,0	0,4	1,5	239	276
CT1206S14BAUTOG	24,5	22	+23/-0	40	1,0	0,8	1,8	240	276
CT1210S14BAUTOG	24,5	22	+23/-0	40	2,5	1,7	1,8	242	276
CT1812S14BAUTOG	24,5	22	+23/-0	40	5,0	5,6	2,5	244	276
CT2220S14BAUTOG	24,5	22	+23/-0	40	10,0	9,5	3,0	245	276
CT2220S14BAUTOE2G2	24,5	22	+23/-0	40	10,0	15,0	3,0	245	276
24-V supply systems									
CT2220K25AUTOE2G2	40,0	39	± 10	65	10,0	10,0	3,0	245	275
CT2220K30AUTOG	45,0	47	± 10	77	10,0	4,0	3,0	245	275
CT2220K30AUTOE2G2	45,0	47	± 10	77	10,0	10,0	3,0	245	275

Also called: ① working voltage; ② peak current; ③ transient energy ④ breakdown voltage

Notes

New ordering codes implemented (refer to chapter Varistor Type Cross-Reference List)

- If the maximum loads specified for load dump and jump start are fully utilized, subsequent polarity reversal of the AUTO varistors is inadmissible.
- If the load remains under the maximum ratings, polarity reversal may be admissible. Contact EPCOS for consultancy on this kind of problem.
- Load dump or jump start can decrease the varistor voltage in load direction by max. 15 %.
- Load dump: min. time of energy input 40 ms, interval 60 s.
(Note: The load dump time constant t_d differs from the time constant of the energy input)


Maximum ratings ($T_A = 125\text{ °C}$)

Type	Ordering code	V_{RMS} V	V_{DC} ^① V	i_{max} ^② 8/20 μ s A	W_{max} ^③ (2 ms) J	P_{max} W	W_{LD} (10x) J
SIOV-	NEW						
12-V supply systems							
CN0603S14BAUTOG	B72500-V1140-S260	14	16	30	0,2	0,003	—
CN0805S14BAUTOG	B72510-V1140-S262	14	16	120	0,3	0,008	1,0
CN1206S14BAUTOG	B72520-V1140-S262	14	16	200	0,6	0,008	1,5
CN1210S14BAUTOG	B72530-V1140-S262	14	16	400	1,6	0,010	3,0
CN1812S14BAUTOG	B72580-V1140-S262	14	16	800	2,4	0,015	6,0
CN2220S14BAUTOG	B72540-V1140-S262	14	16	1200	5,8	0,030	12,0
CN2220S14BAUTOE2G2	B72540-V3140-S272	14	16	1200	5,8	0,030	25,0
24-V supply systems							
CN2220K25AUTOE2G2	B72540-V3250-K072	25	31	1200	9,6	0,030	25,0
CN2220K30AUTOG	B72540-V1300-K062	30	34	1200	12,0	0,030	12,0
CN2220K30AUTOE2G2	B72540-V3300-K072	30	34	1200	12,0	0,030	25,0

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

Type	V_{Jump} (5 min) V	V_V ^④ (1 mA) V	ΔV_V (1 mA) %	Max. clamping voltage		C_{typ} (1 kHz) nF	L_{typ} nH	Der. curve Page	V/I char. Page
				v V	i A				
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CN0603S14BAUTOG	24,5	22	+23/-0	42	1,0	0,12	1,0	238	276
CN0805S14BAUTOG	24,5	22	+23/-0	42	1,0	0,4	1,5	239	276
CN1206S14BAUTOG	24,5	22	+23/-0	40	1,0	0,8	1,8	240	276
CN1210S14BAUTOG	24,5	22	+23/-0	40	2,5	1,7	1,8	242	276
CN1812S14BAUTOG	24,5	22	+23/-0	40	5,0	5,6	2,5	244	276
CN2220S14BAUTOG	24,5	22	+23/-0	40	10,0	9,5	3,0	245	276
CN2220S14BAUTOE2G2	24,5	22	+23/-0	40	10,0	15,0	3,0	245	276
24-V supply systems									
CN2220K25AUTOE2G2	40,0	39	\pm 10	65	10,0	10,0	3,0	245	275
CN2220K30AUTOG	45,0	47	\pm 10	77	10,0	4,0	3,0	245	275
CN2220K30AUTOE2G2	45,0	47	\pm 10	77	10,0	10,0	3,0	245	275

Also called: ① working voltage; ② peak current; ③ transient energy ④ breakdown voltage

Notes

New ordering codes implemented (refer to chapter Varistor Type Cross-Reference List)

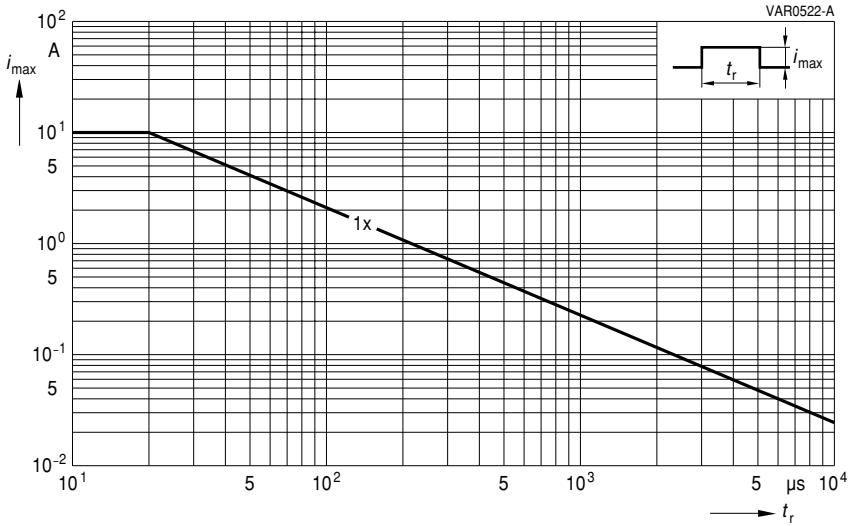
- If the maximum loads specified for load dump and jump start are fully utilized, subsequent polarity reversal of the AUTO varistors is inadmissible.
- If the load remains under the maximum ratings, polarity reversal may be admissible. Contact EPCOS for consultancy on this kind of problem.
- Load dump or jump start can decrease the varistor voltage in load direction by max. 15 %.
- Load dump: min. time of energy input 40 ms, interval 60 s.
(Note: The load dump time constant t_d differs from the time constant of the energy input)

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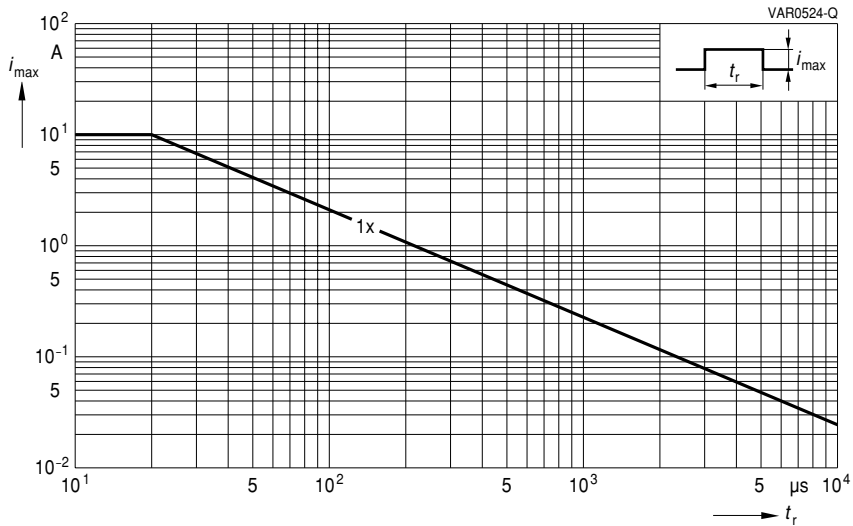
Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-CT/CN0402L14G(K2)
SIOV-CT/CN0603K17LCG



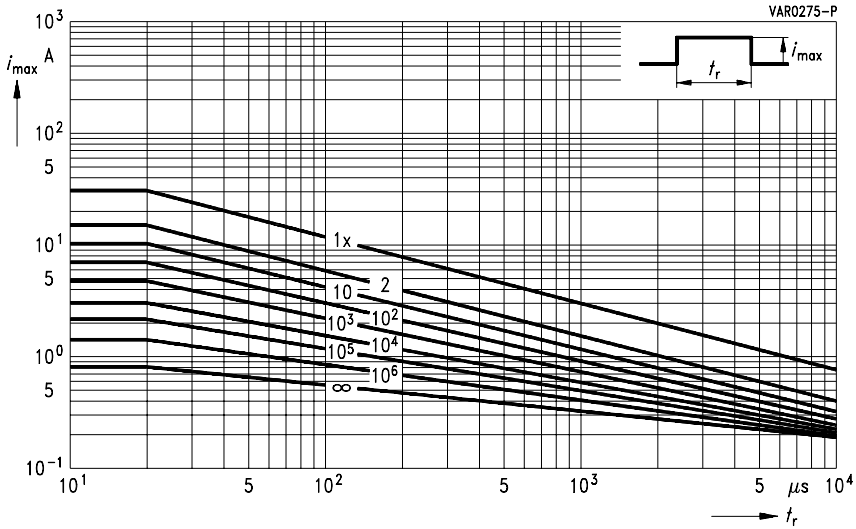
SIOV-CA05P4S17ALCGK2
SIOV-CA04P2S17ALCGK2

SIOV Metal Oxide Varistors

Derating Curves

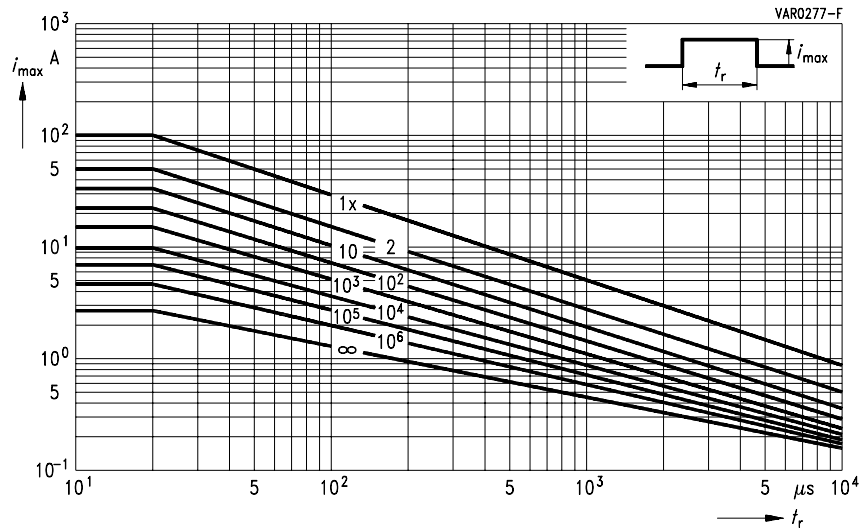
Maximum surge current

$i_{max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-CT/CN0603M4G ... K25G
SIOV-CT/CN0603S14BAUTOG

SIOV-CT/CN0805K17LCG
SIOV-CA06P4M7GK2 ... S17ALCGK2



SIOV-CT/CN0805M4G

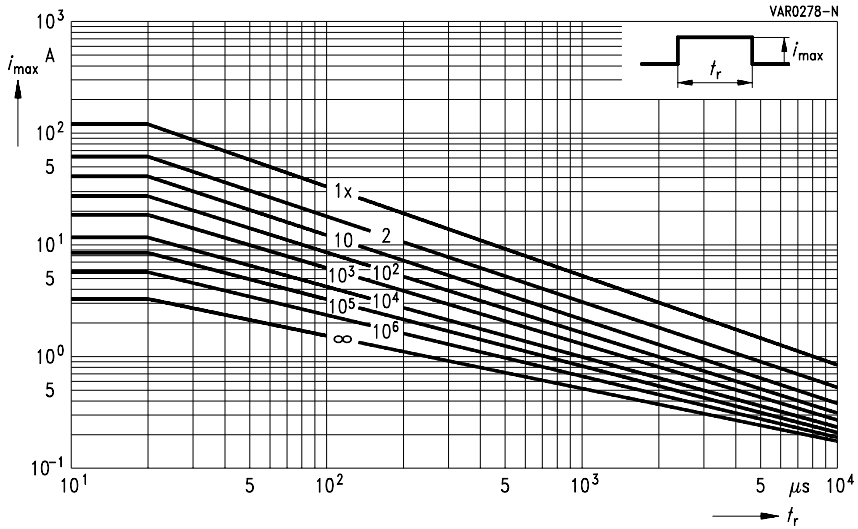
SIOV-CT/CN1206K35G ... K60G

SIOV Metal Oxide Varistors

Derating Curves

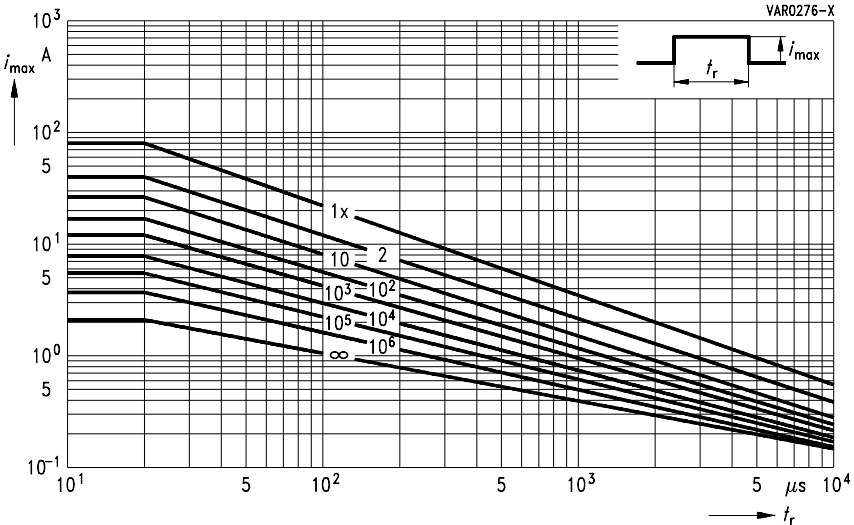
Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-CT/CN0805M6G ... K17G
SIOV-CT/CN0805S14BAUTOG

SIOV-CT/CN0805M6CCG



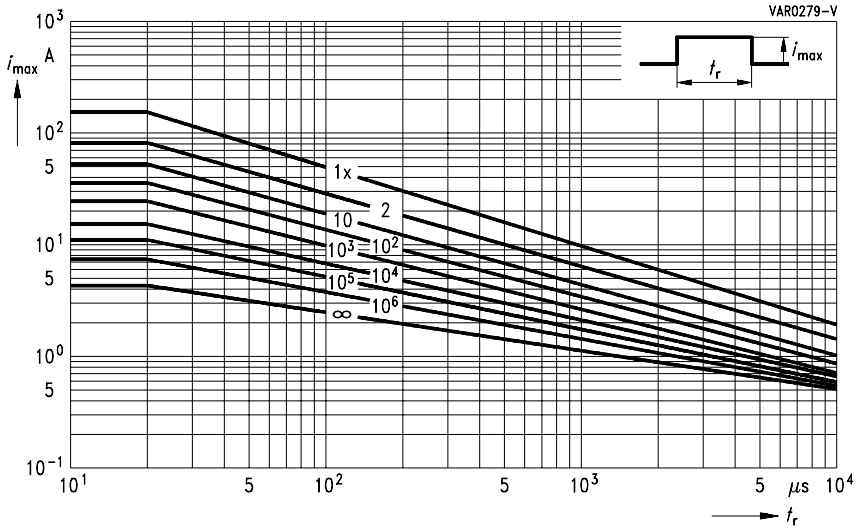
SIOV-CT/CN0805K20G ... K30G

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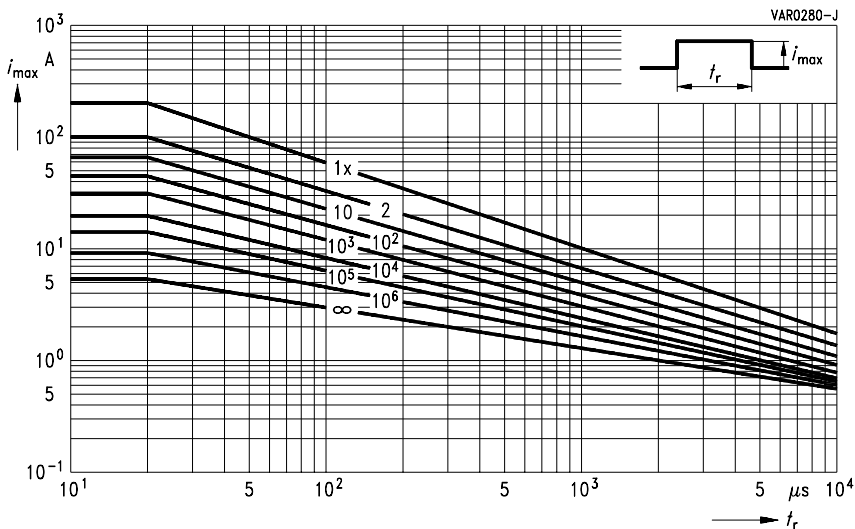
Derating Curves

Maximum surge current

$i_{max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-CT/CN1206M4G



SIOV-CT/CN1206M6G ... K30G

SIOV-CT/CN1206S14BAUTOG

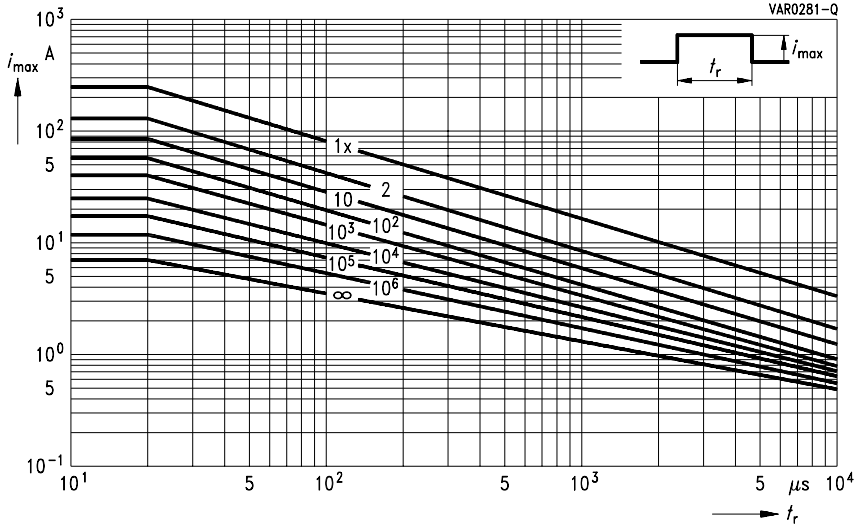
SIOV-CT/CN1210K50G ... K60G

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Derating Curves

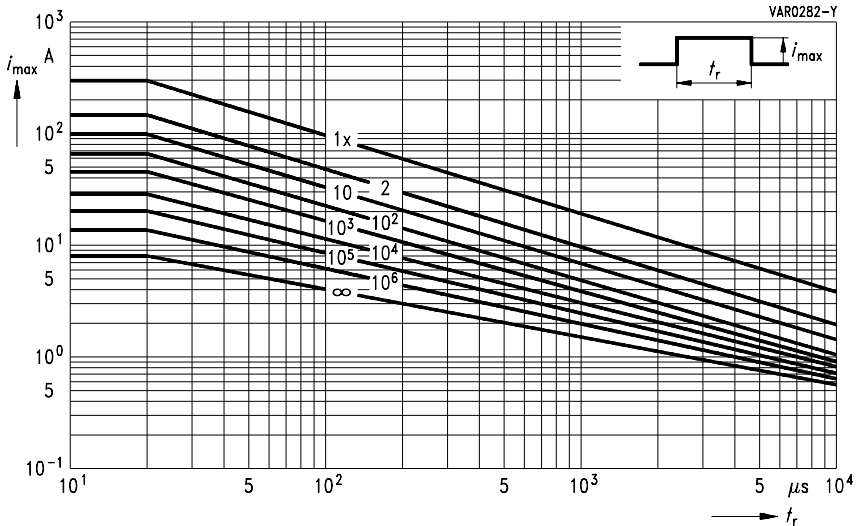
Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-CT/CN1210M4G

SIOV-CT/CN1210K35G ... K40G



SIOV-CT/CN1210M6G

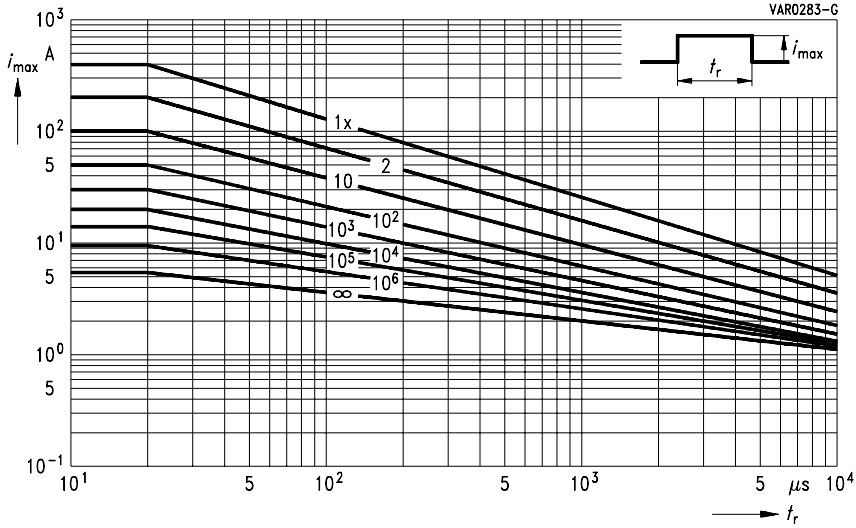
SIOV-CT/CN1210K25G ... K30G

SIOV Metal Oxide Varistors

Derating Curves

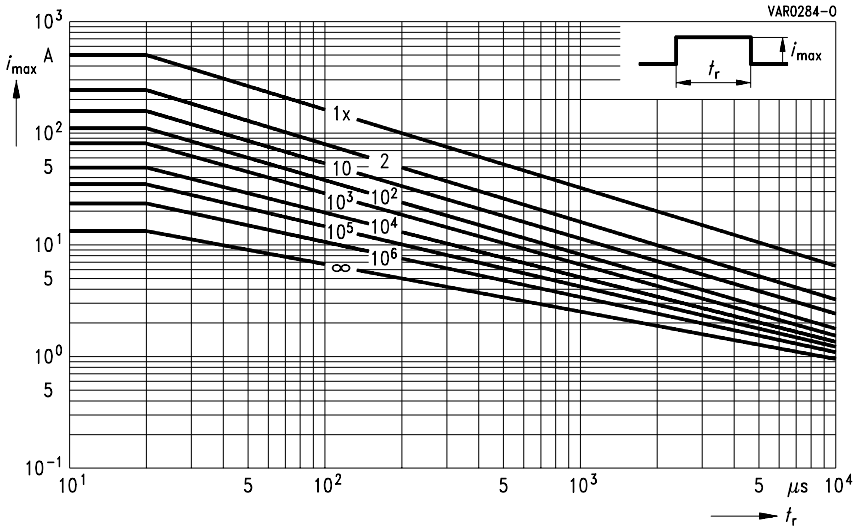
Maximum surge current

$i_{max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-CT/CN1210L8G ... K20G
SIOV-CT/CN1812K50G ... K60G

SIOV-CT/CN1210S14BAUTOG



SIOV-CT/CN1812M4G ... M6G

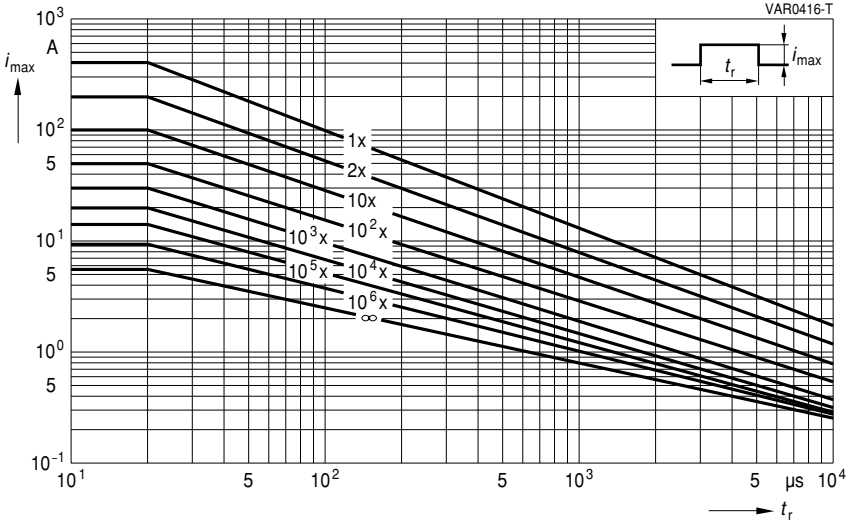
SIOV-CT/CN1812K35G ... K40G

SIOV Metal Oxide Varistors

Derating Curves

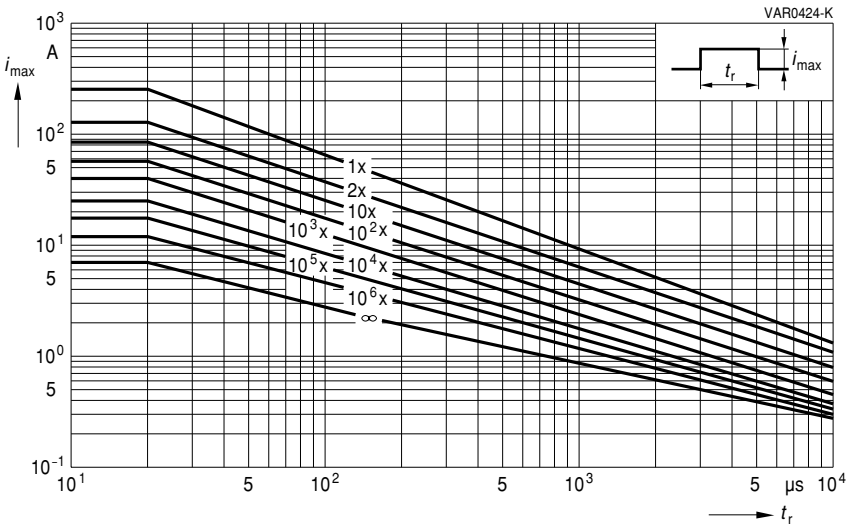
Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-CT/CN1812S60AG2

SIOV-CT/CN1812K75TELEG2



SIOV-CT/CN1812S95AG2

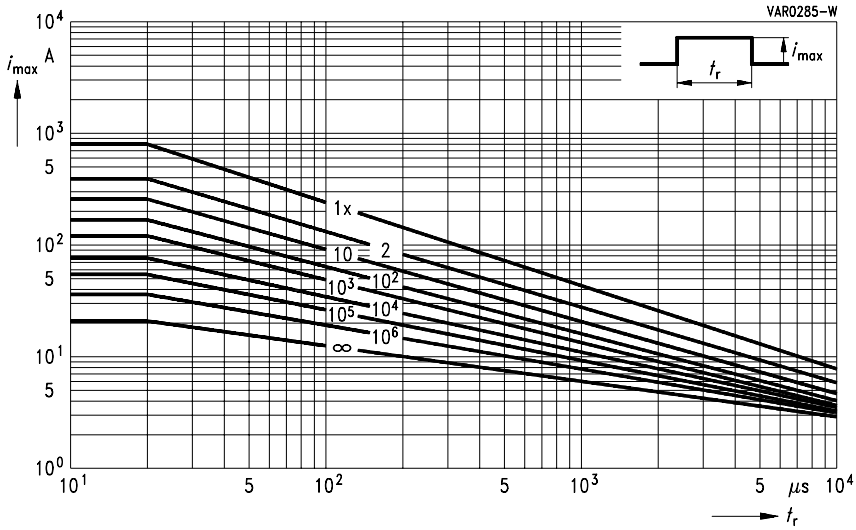
SIOV-CT/CN1812K115 ... K130TELEG2

SIOV Metal Oxide Varistors

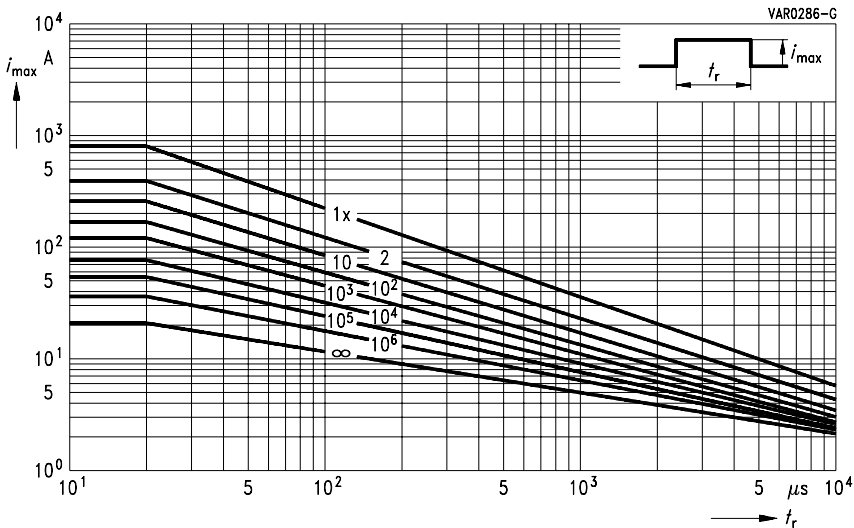
Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-CT/CN1812L8G ... K30G SHCV-SR1 ... X/Z
SIOV-CT/CN1812S14BAUTOG



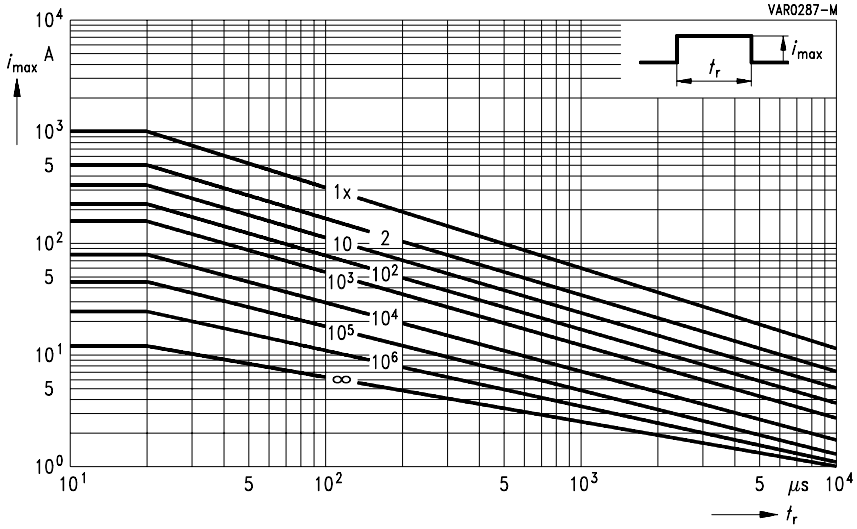
SIOV-CT/CN2220K50G ... K60G

SIOV Metal Oxide Varistors

Derating Curves

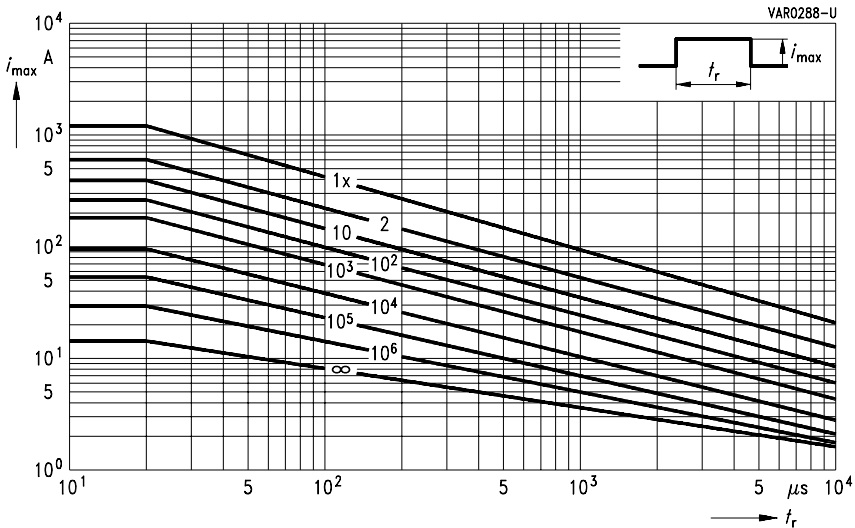
Maximum surge current

$i_{max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-CT/CN2220M4G

SIOV-CT/CN2220K35G ... K40G



SIOV-CT/CN2220M6G ... K30G

SHCV-SR2 ... X/Z

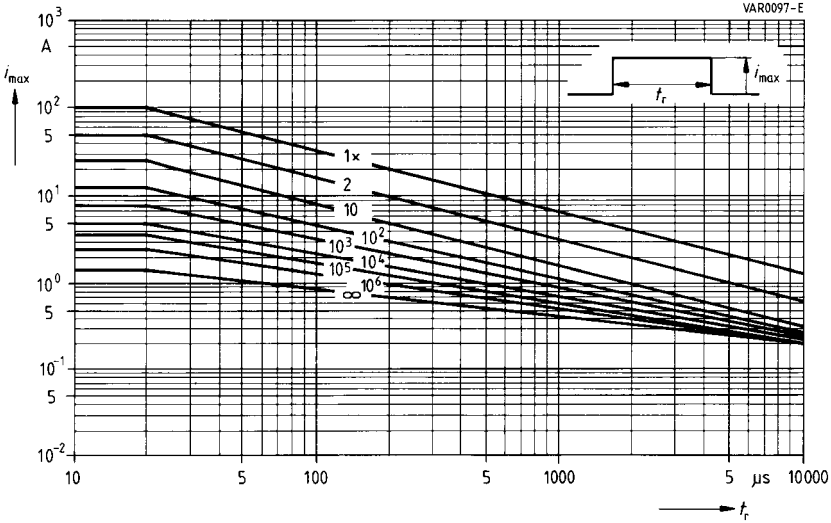
SIOV-CT/CN2220 ... AUTO(E2)G(2)

SIOV Metal Oxide Varistors

Derating Curves

Maximum surge current

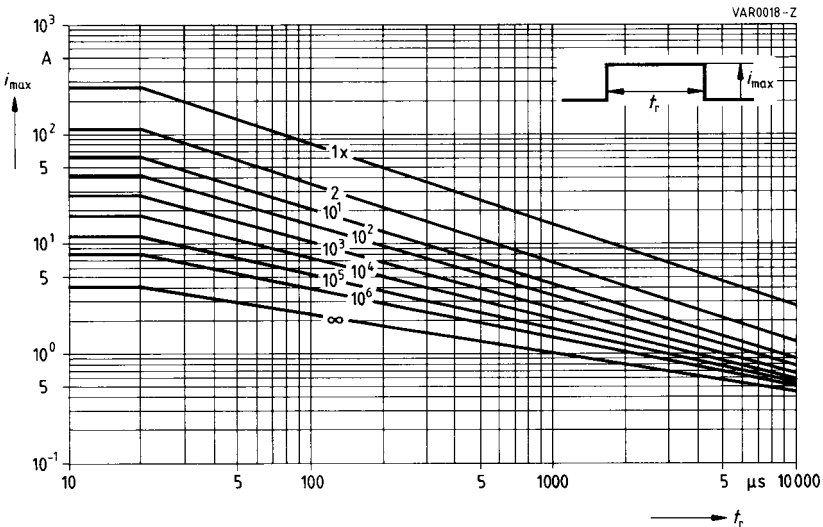
$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-S05K11 ... K40

SIOV-CU3225K11G2 ... K40G2

SIOV-CU3225K14AUTOG2 ... K30AUTOG2



SIOV-S07K11 ... K40

SIOV-CU4032K11G2 ... K40G2

SIOV-S07K14AUTOS2D1

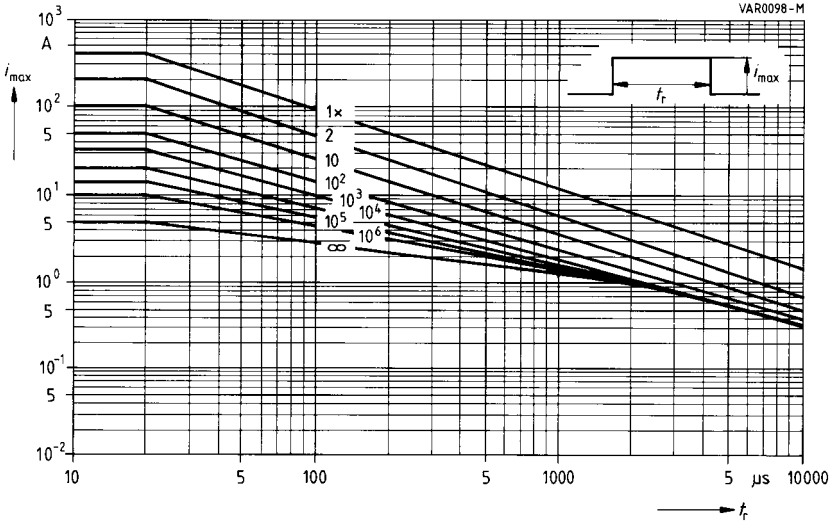
SIOV-CU4032K14AUTOG2 ... K30AUTOG2

SIOV Metal Oxide Varistors

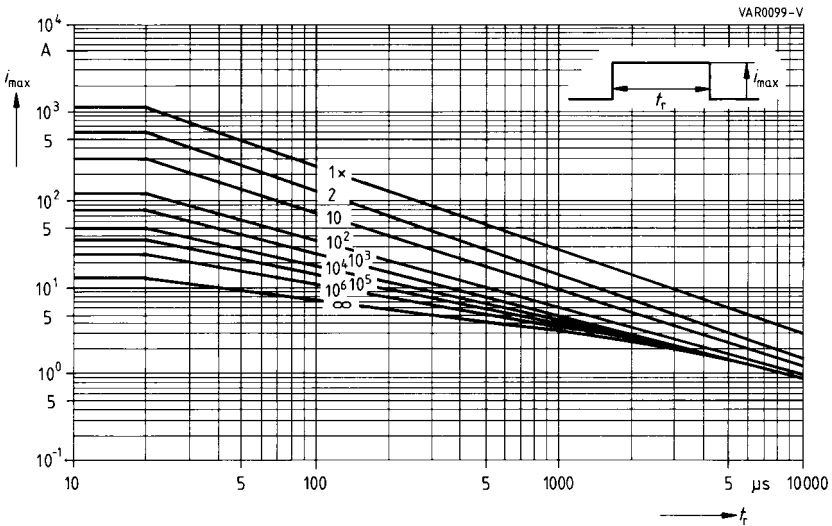
Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-S05K50 ... K460
SIOV-CU3225K50G2 ... K300G2



SIOV-S07K50 ... K460
SIOV-S07S60AGS2/95AGS2

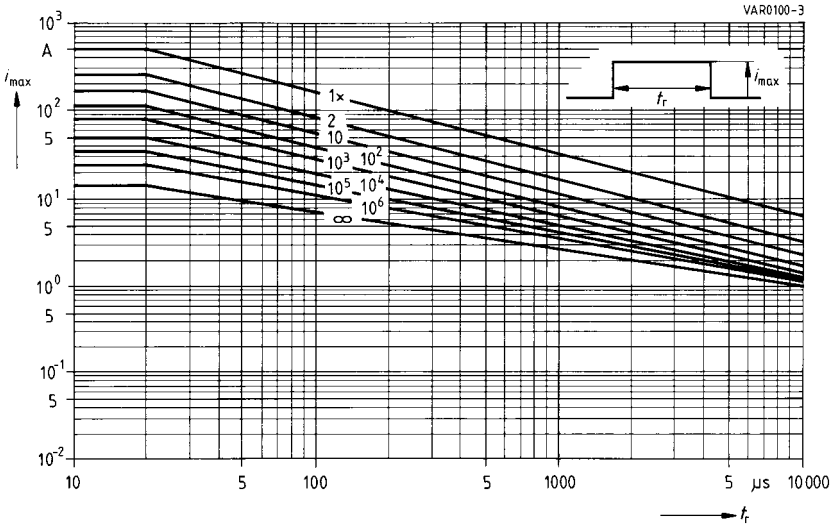
SIOV-CU4032K50G2 ... K300G2
SIOV-CU4032S60AG2/S95AG2

SIOV Metal Oxide Varistors

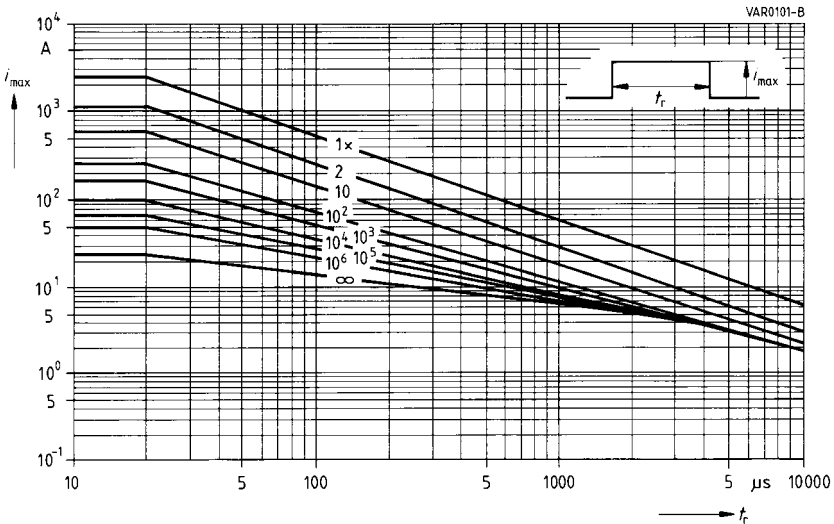
Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{ pulse train - for explanation of the derating curves refer to section 1.8.1})$



SIOV-S10K11 ... K40
SIOV-S10K14AUTO ... K40AUTO
SIOV-S10K14AUTOS5D1



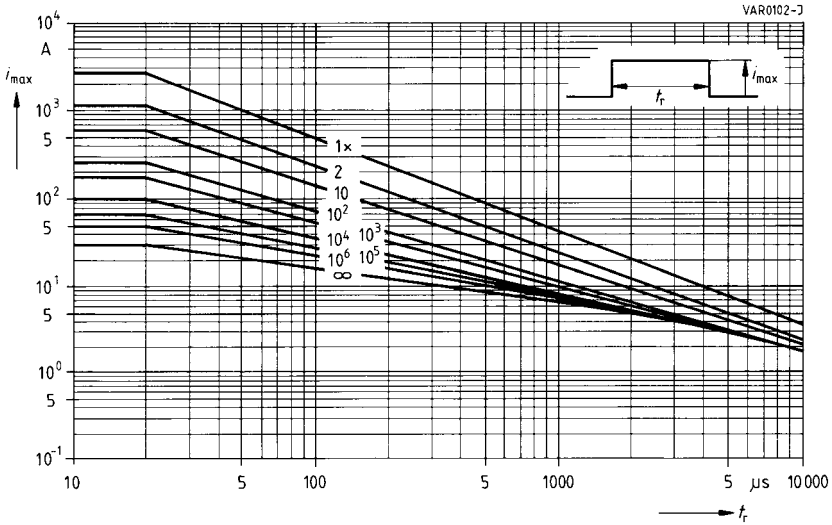
SIOV-S10K50 ... K320

SIOV Metal Oxide Varistors

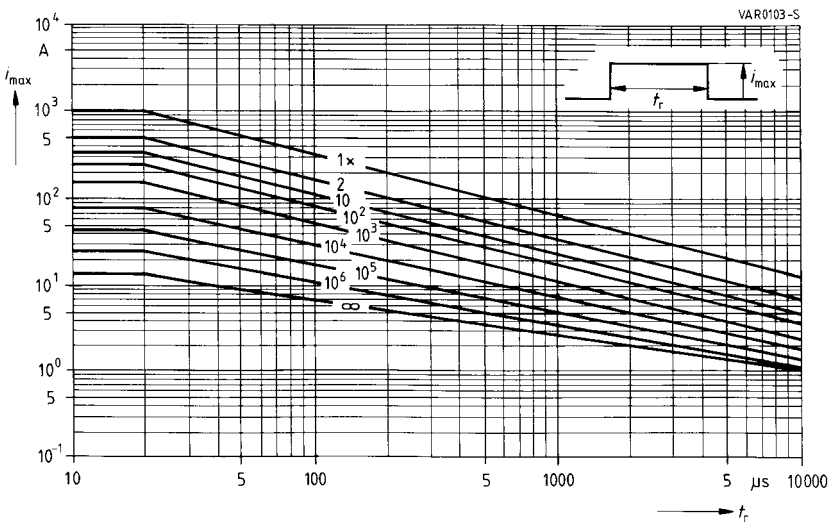
Derating Curves

Maximum surge current

$i_{\max} = f(t_r)$, pulse train – for explanation of the derating curves refer to section 1.8.1)



SIOV-S10K385 ... K680



SIOV-S14K11 ... K40

SIOV-S14K14AUTO ... K40AUTO

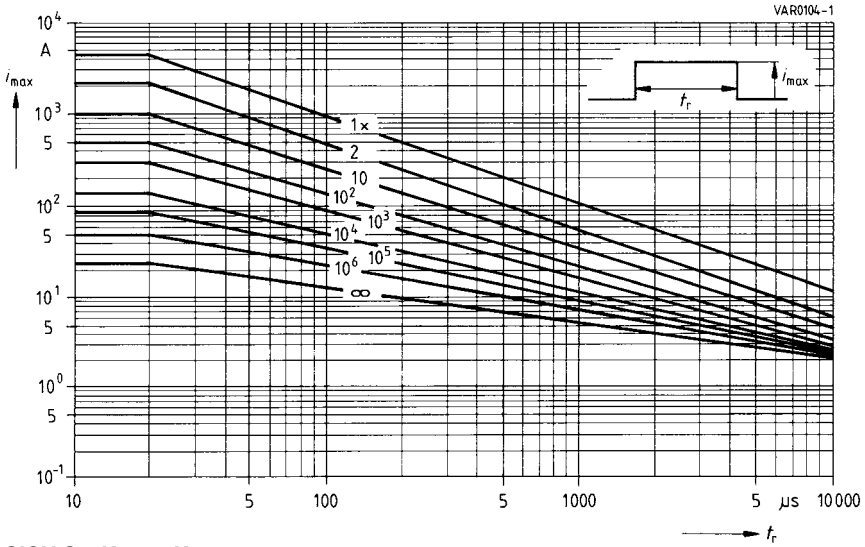
SIOV-S14K14AUTOS5D1

SIOV Metal Oxide Varistors

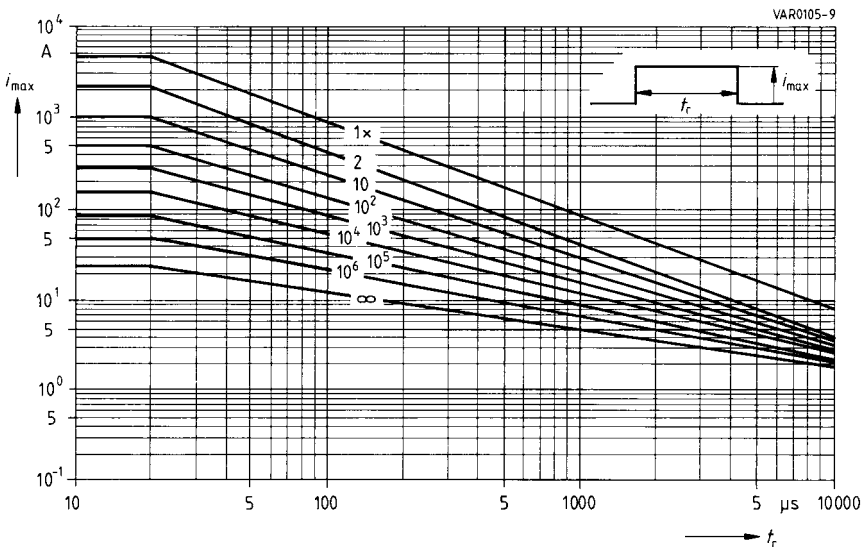
Derating Curves

Maximum surge current

$i_{\max} = f(t_r)$, pulse train – for explanation of the derating curves refer to section 1.8.1)



SIOV-S14K50 ... K320



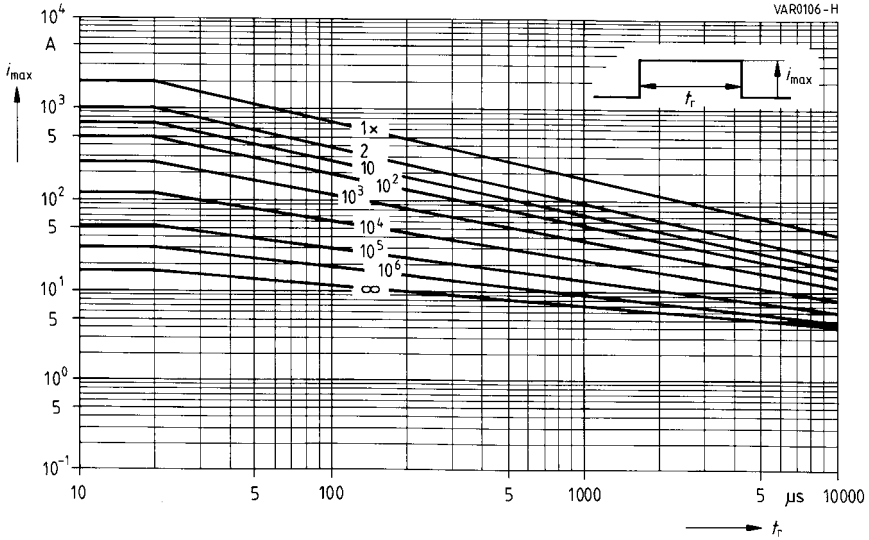
SIOV-S14K385 ... K1000

SIOV Metal Oxide Varistors

Derating Curves

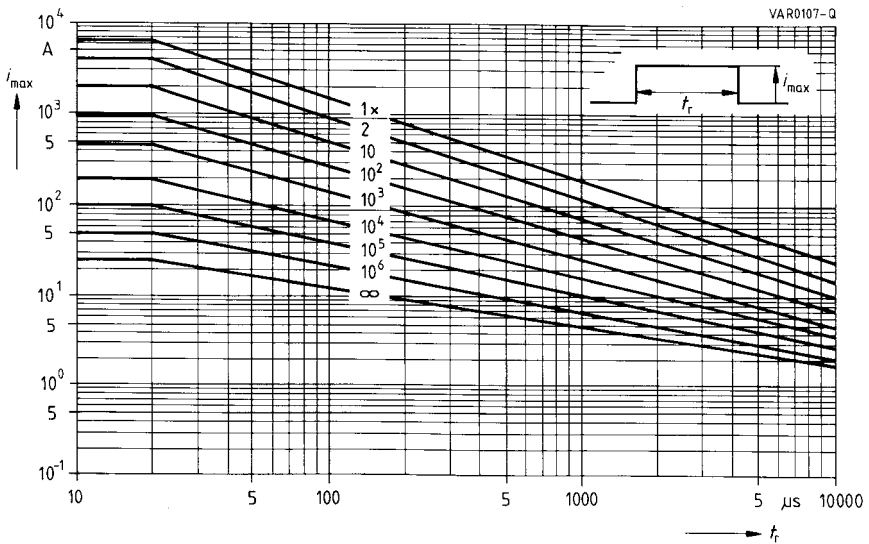
Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-S20K11 ... K40

SIOV-S20K14AUTO ... K30AUTO



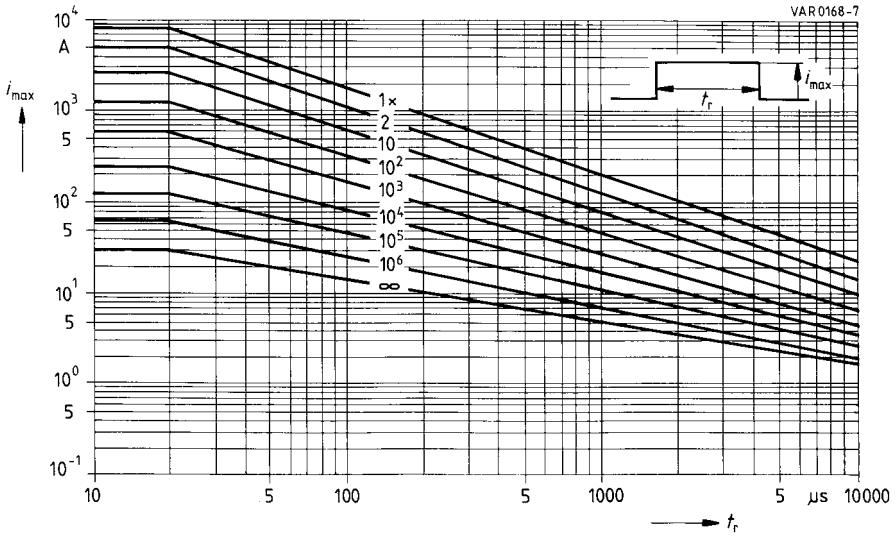
SIOV-S20K50 ... K115

SIOV Metal Oxide Varistors

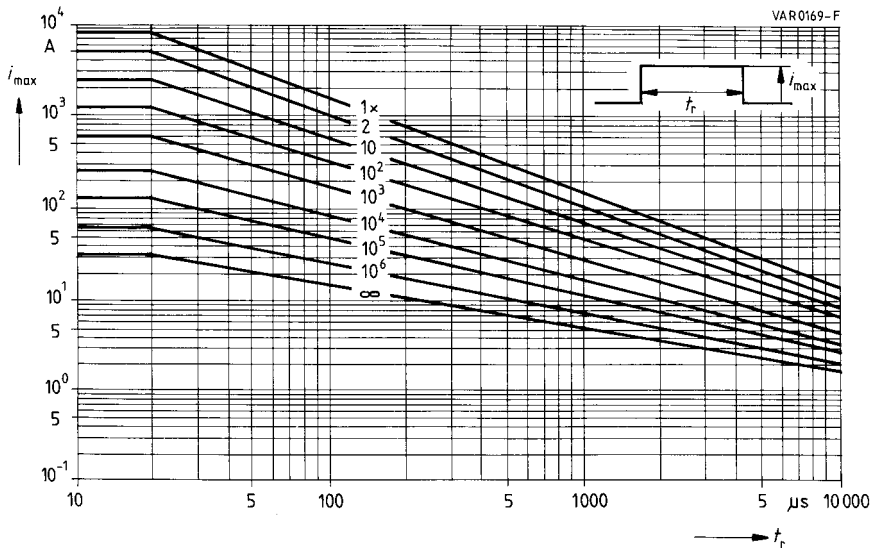
Derating Curves

Maximum surge current

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SIOV-S20K130 ... K320



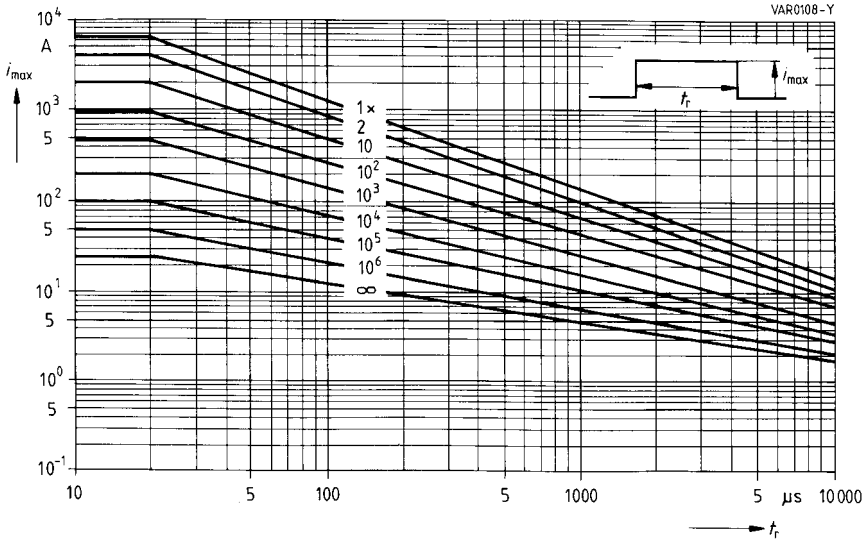
SIOV-S20K385 ... K460

SIOV Metal Oxide Varistors

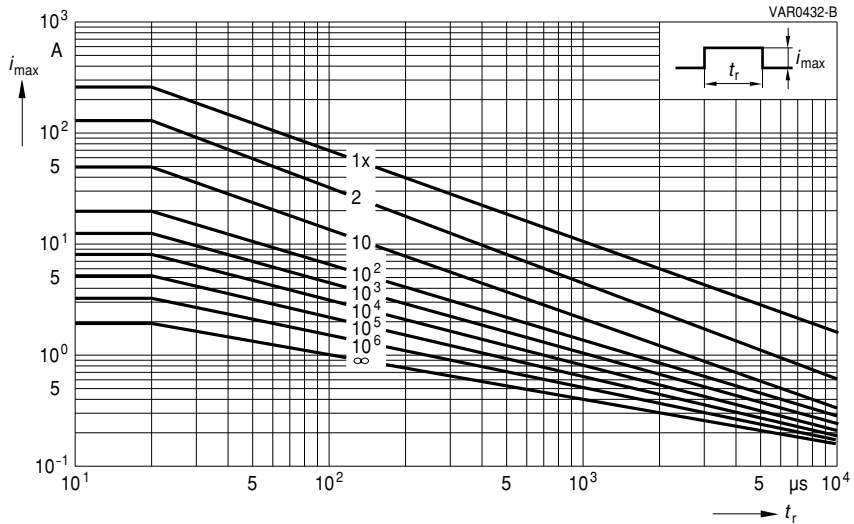
Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-S20K510 ... K1000



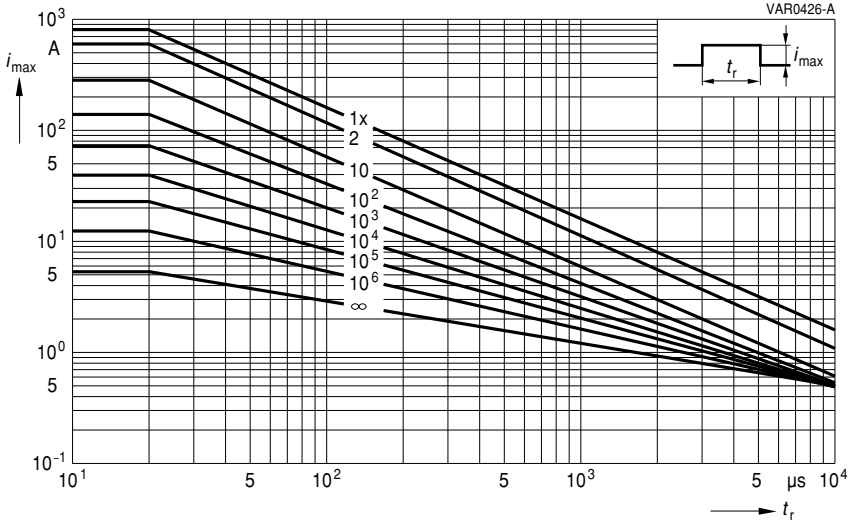
SIOV-S05K11 ... K40E2

SIOV Metal Oxide Varistors

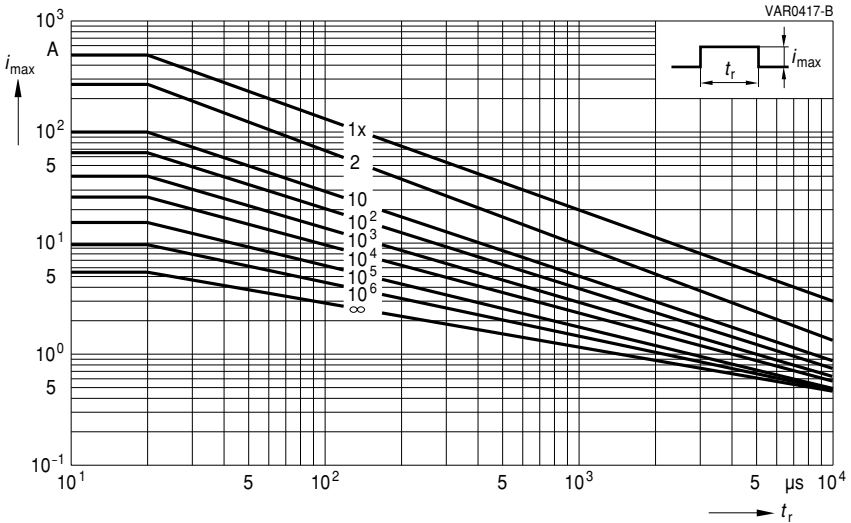
Derating Curves

Maximum surge current

$i_{max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-S05K50 ... K300E2



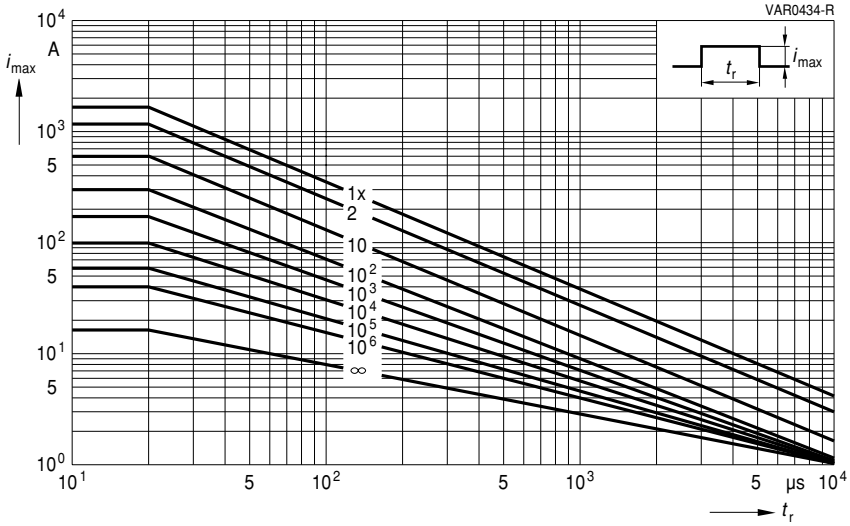
SIOV-S07K11 ... K40E2

SIOV Metal Oxide Varistors

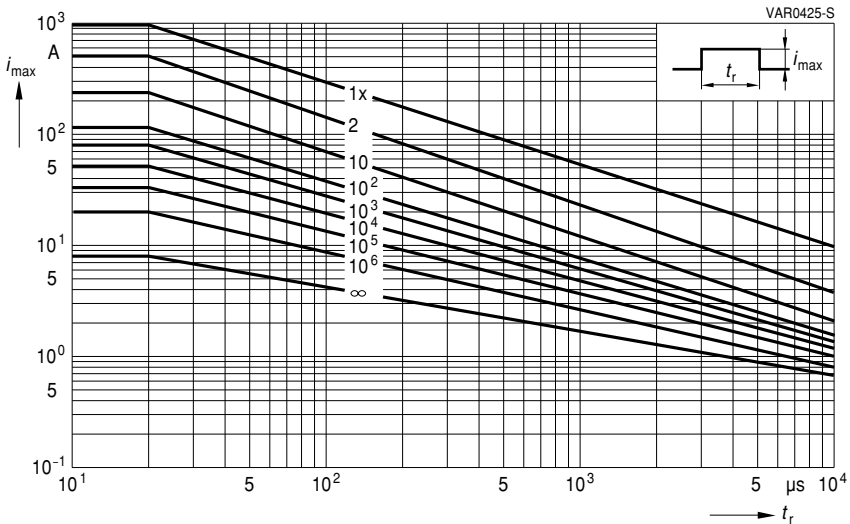
Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-S07K50 ... K320E2



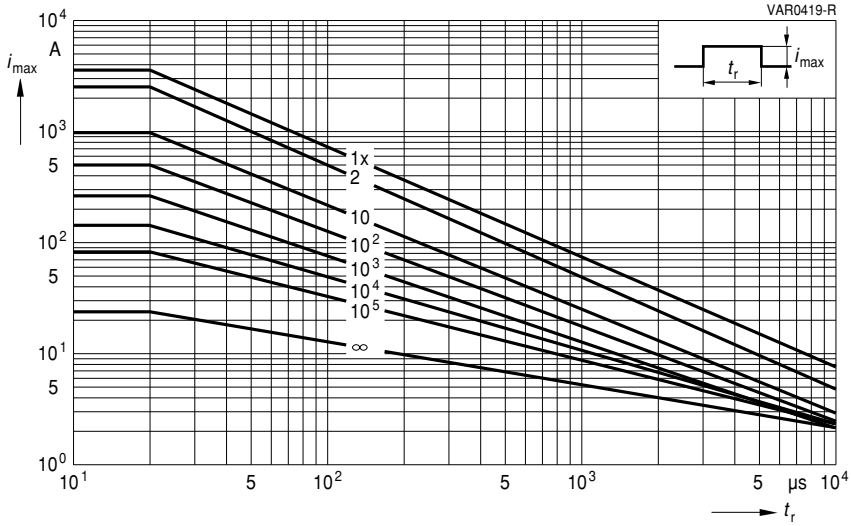
SIOV-S10K11 ... K40E2

SIOV Metal Oxide Varistors

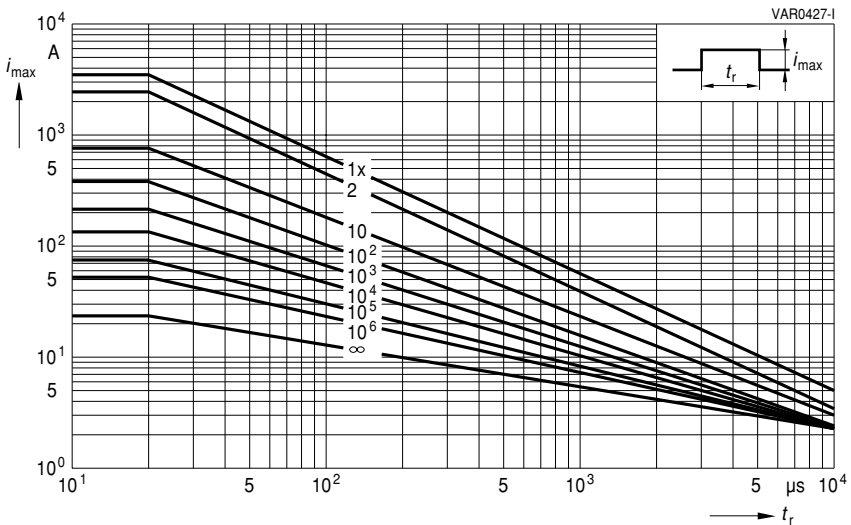
Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-S10K50 ... K320E2



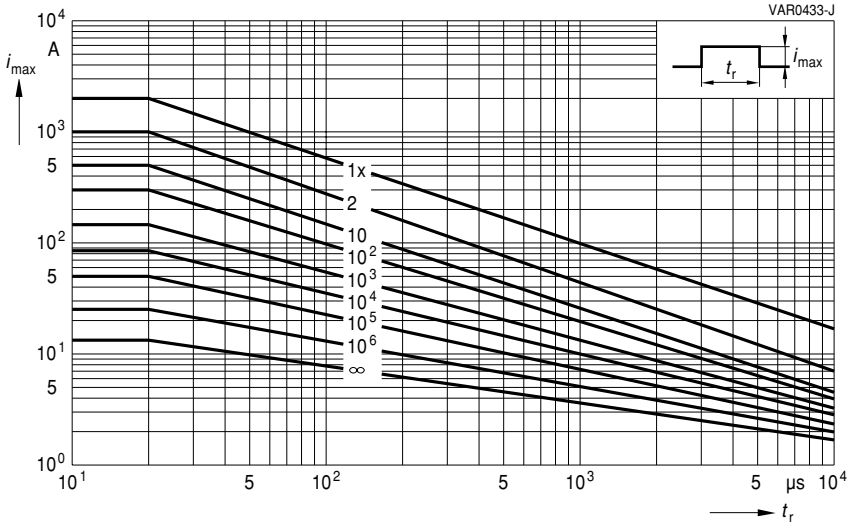
SIOV-S10K385 ... K680E2

SIOV Metal Oxide Varistors

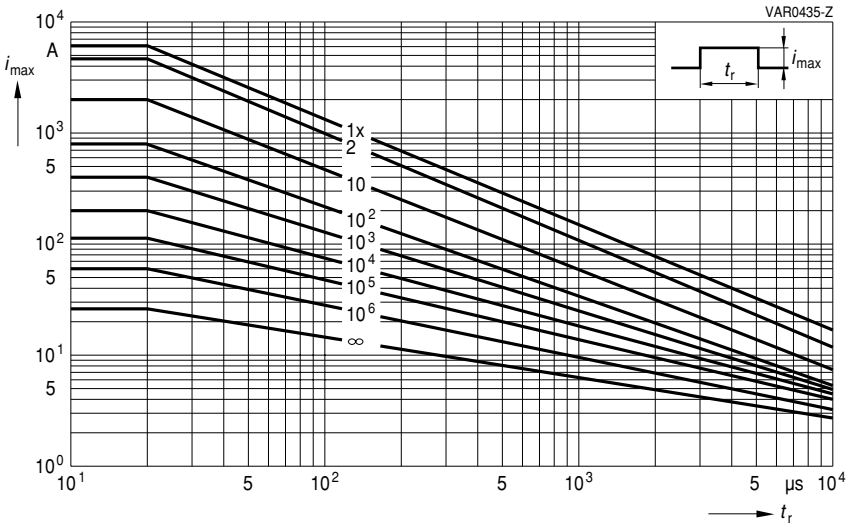
Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-S14K11 ... K40E2



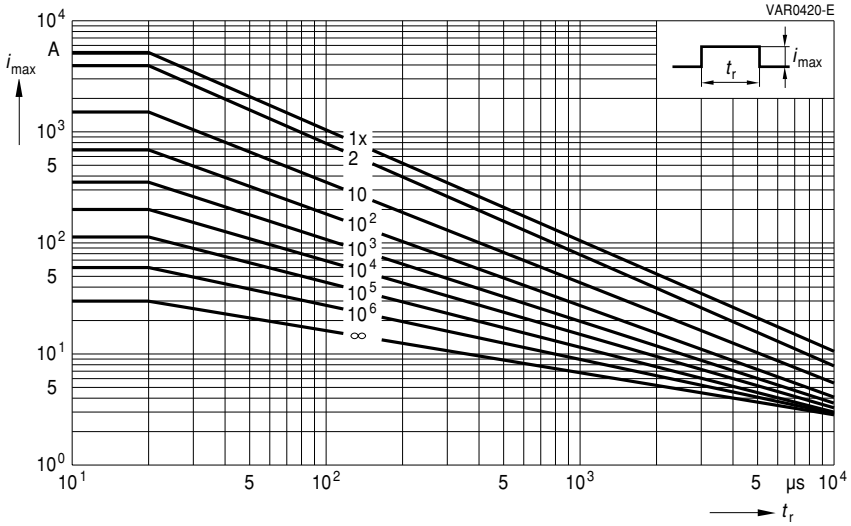
SIOV-S14K50 ... K320E2

SIOV Metal Oxide Varistors

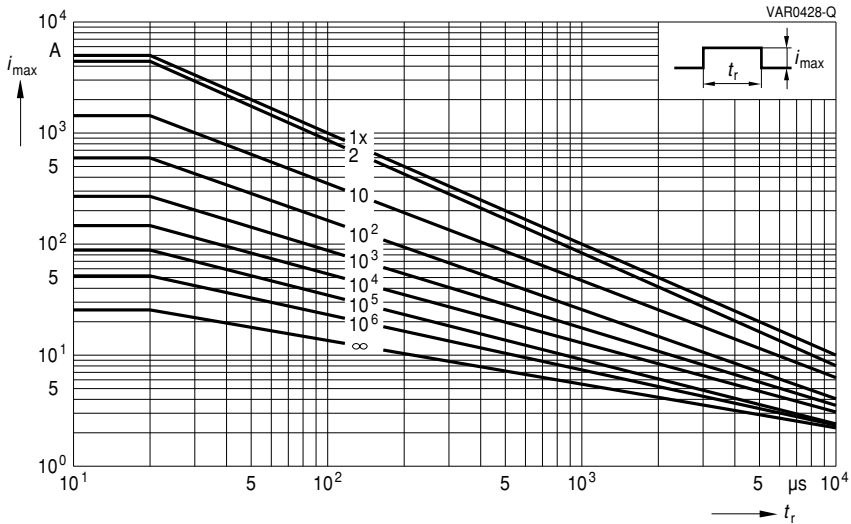
Derating Curves

Maximum surge current

$i_{max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-S14K385 ... K680E2



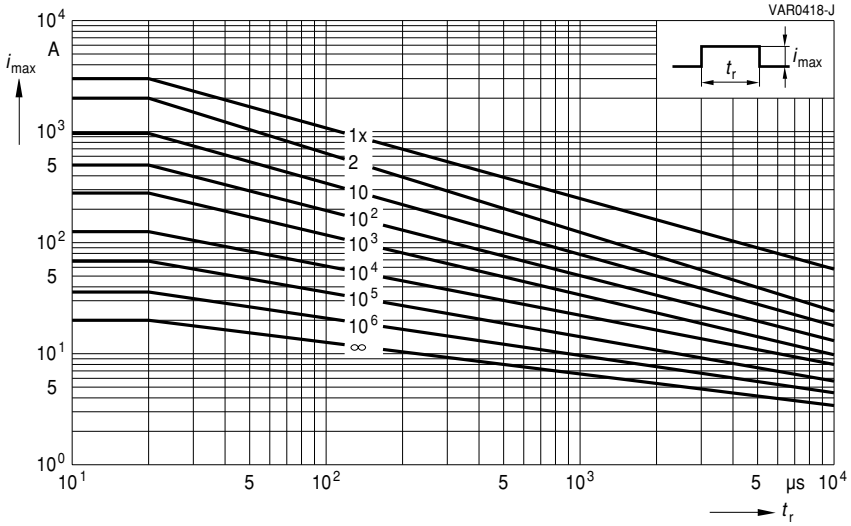
SIOV-S14K1000E2

SIOV Metal Oxide Varistors

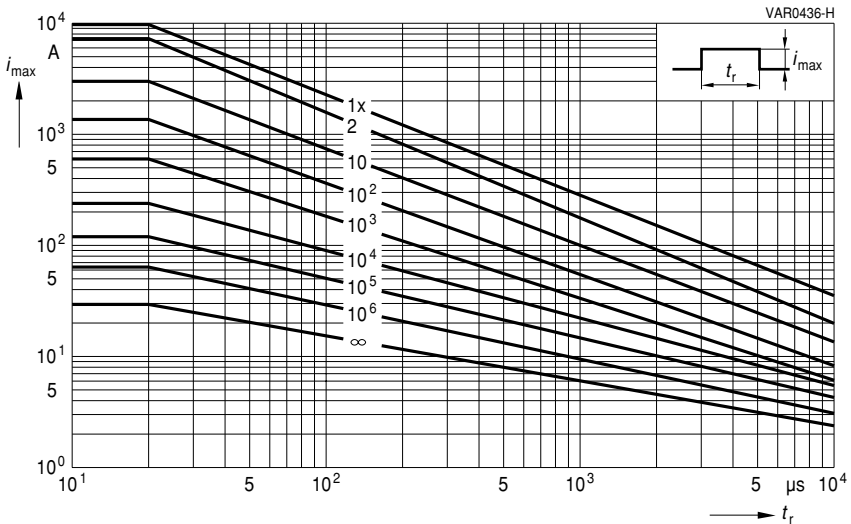
Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-S20K11 ... K40E2



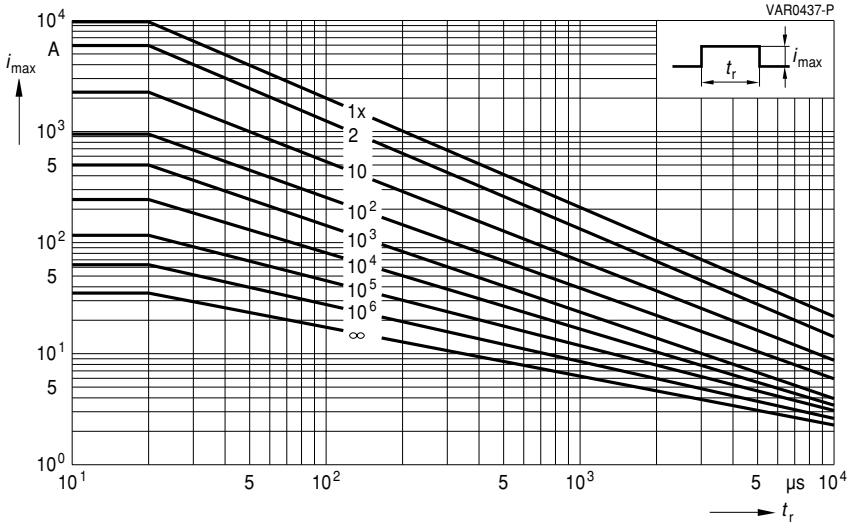
SIOV-S20K50 ... K320E2

SIOV Metal Oxide Varistors

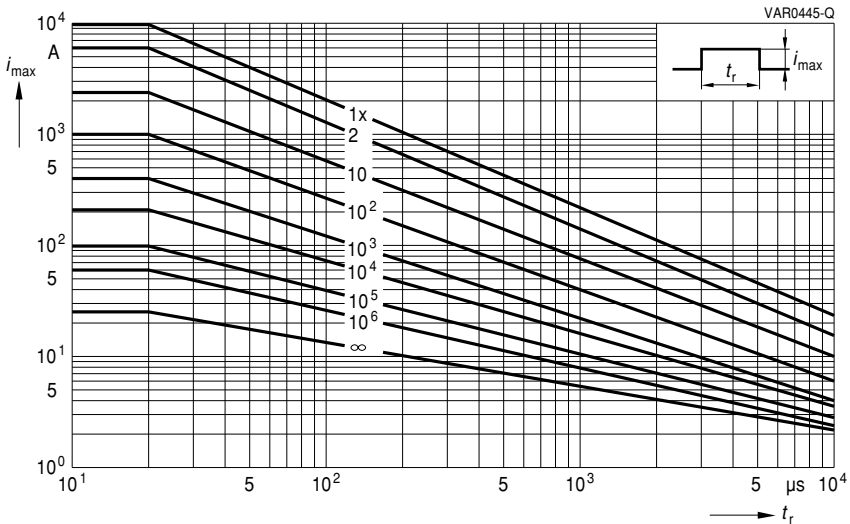
Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-S20K385 ... K680E2



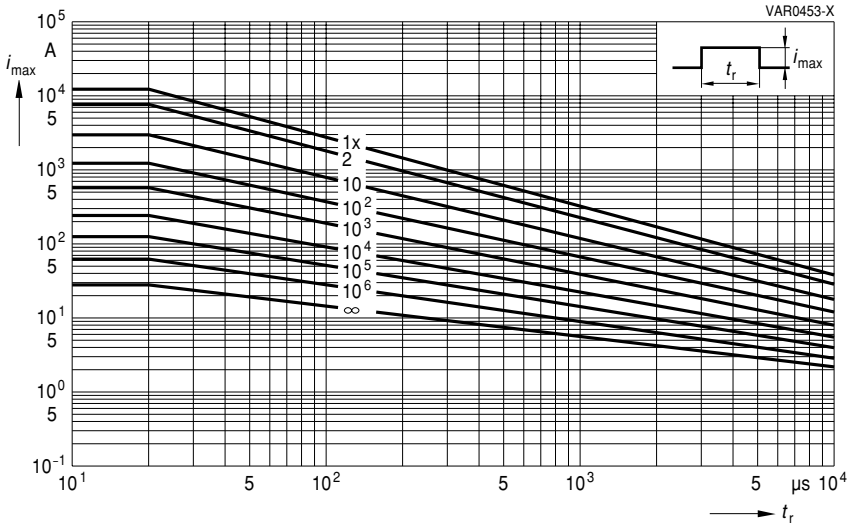
SIOV-S20K1000E2

SIOV Metal Oxide Varistors

Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



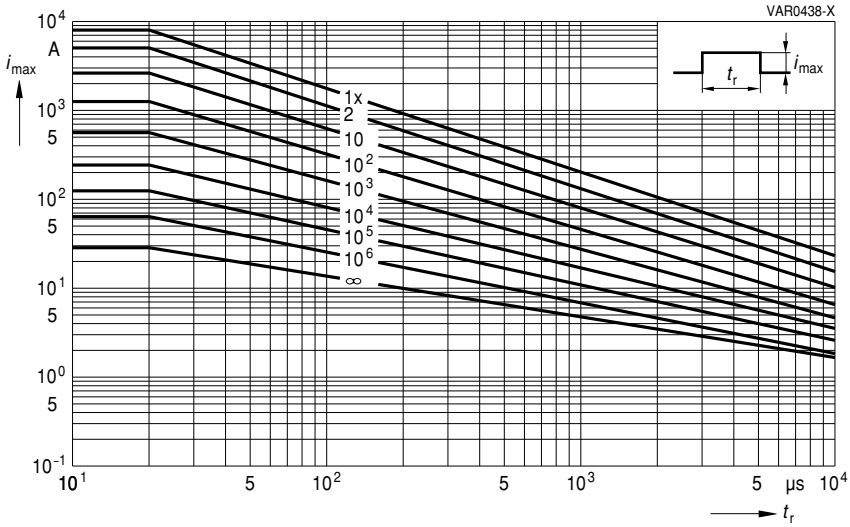
SIOV-S20K115 ... K320E3

SIOV Metal Oxide Varistors

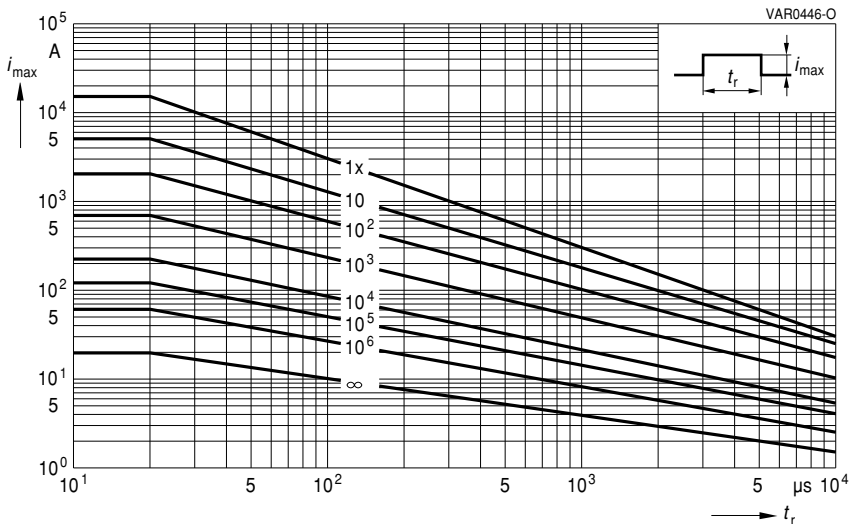
Derating Curves

Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-Q14K130 ... K320



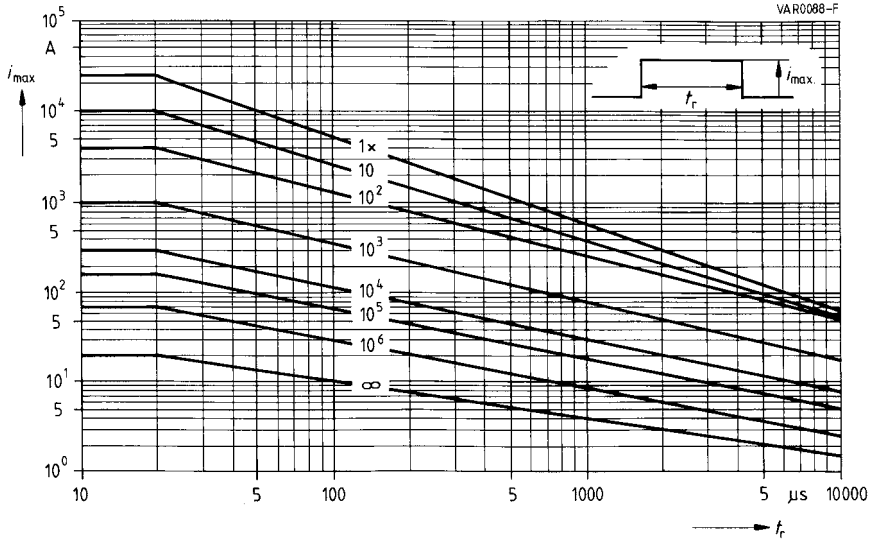
SIOV-Q20K130 ... K320

SIOV Metal Oxide Varistors

Derating Curves

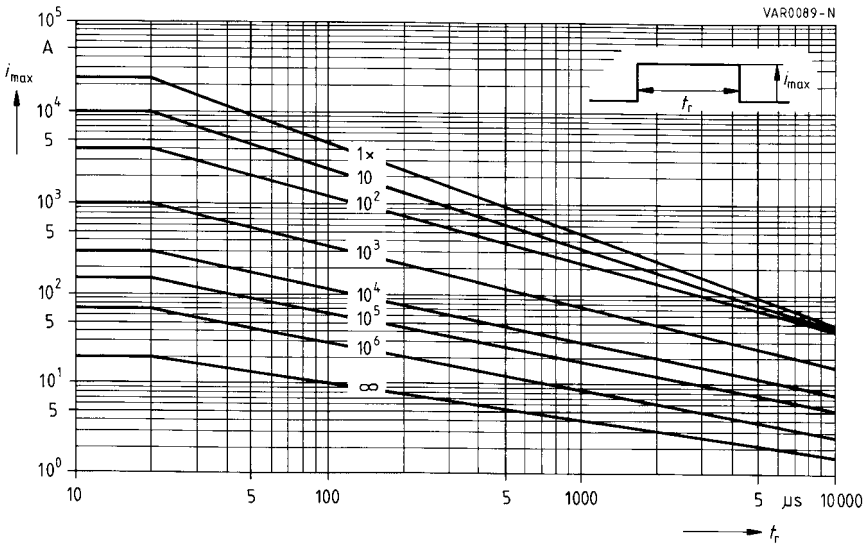
Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-B32K130 ... K150

SIOV-B40K75



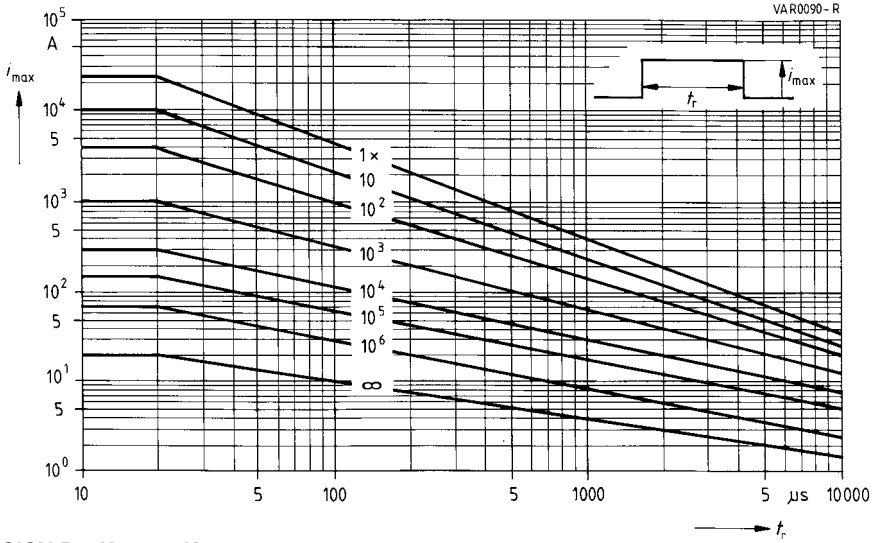
SIOV-B32K230 ... K460

SIOV Metal Oxide Varistors

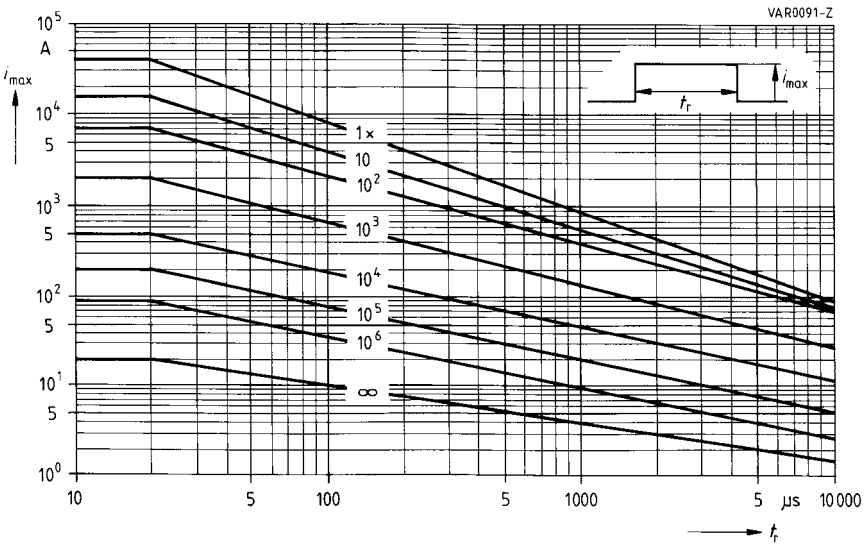
Derating Curves

Maximum surge current

$i_{max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-B32K550 ... K750



SIOV-B40K130 ... K150

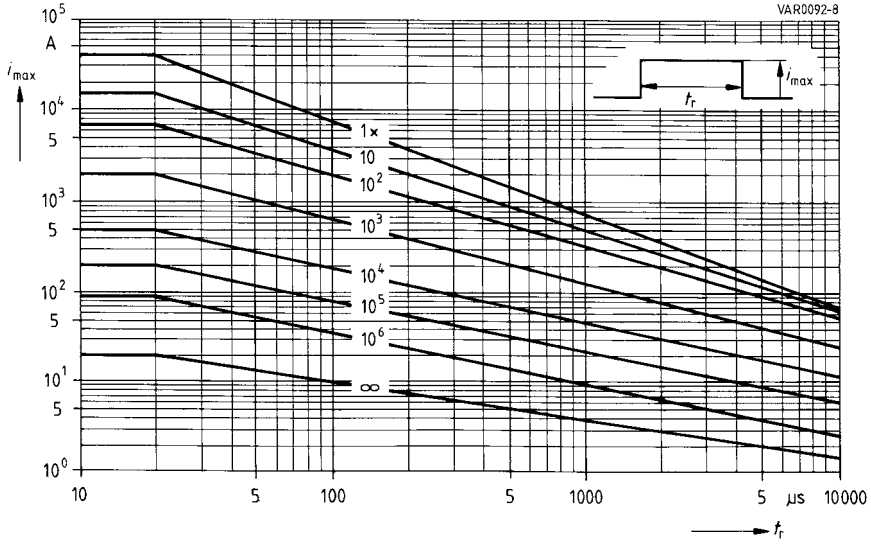
SIOV-LS40K130QP ... K150QP(K2)

SIOV Metal Oxide Varistors

Derating Curves

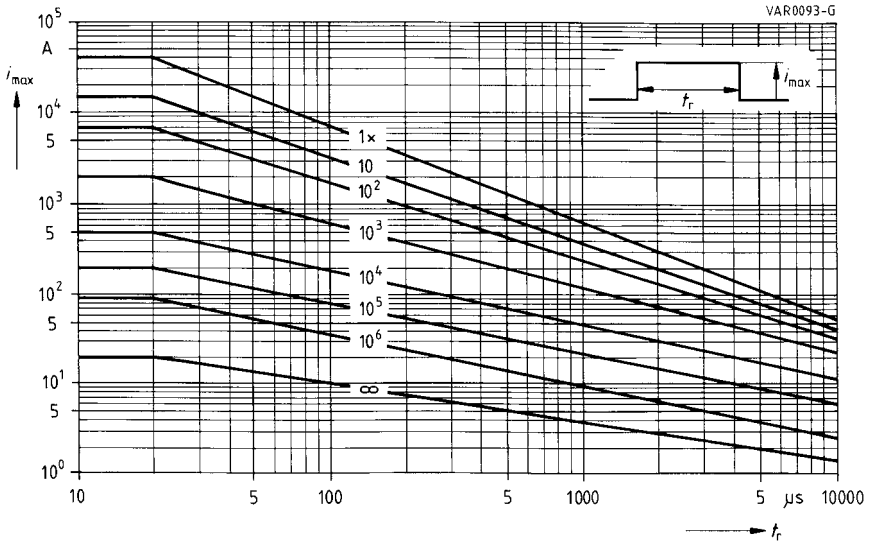
Maximum surge current

$i_{\max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-B40K230 ... K460

SIOV-LS40K230QP ... K460QP(K2)



SIOV-B40K550 ... K750

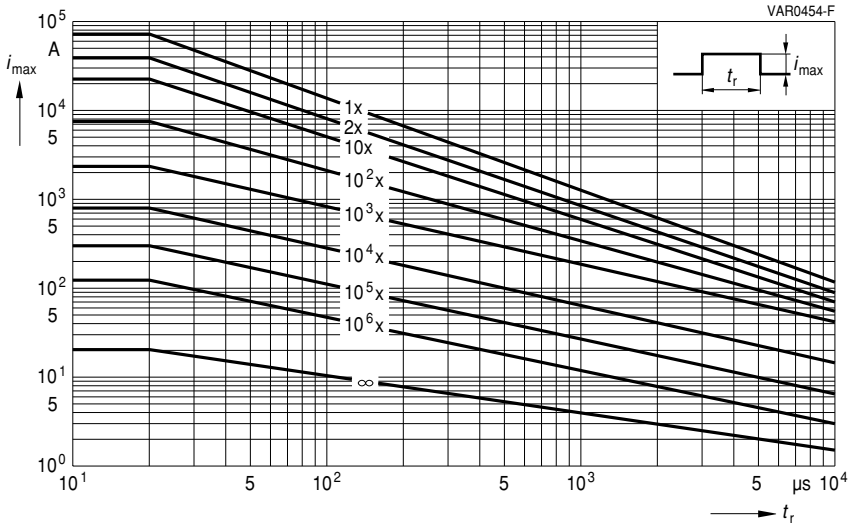
SIOV-LS40K550QP ... K750QP(K2)

SIOV Metal Oxide Varistors

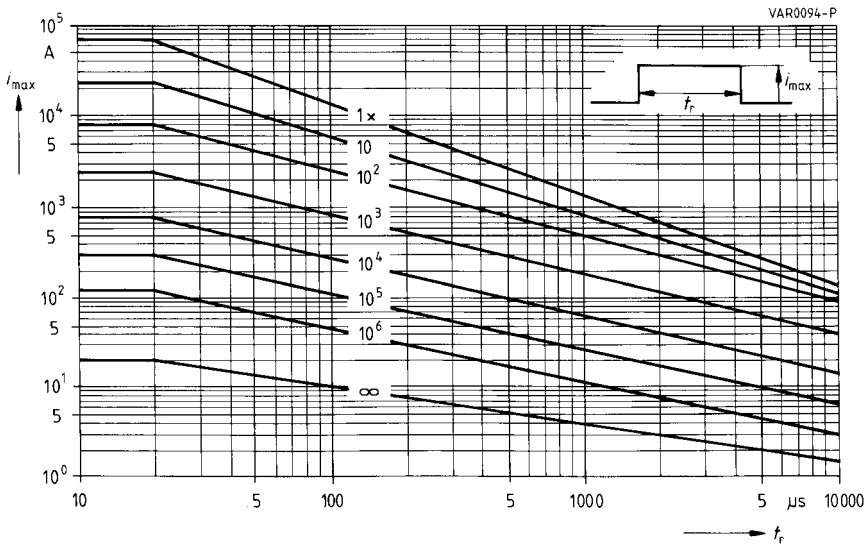
Derating Curves

Maximum surge current

$i_{max} = f(t_r, \text{pulse train})$ – for explanation of the derating curves refer to section 1.8.1)



SIOV-LS50K130 ... K550P(K2)



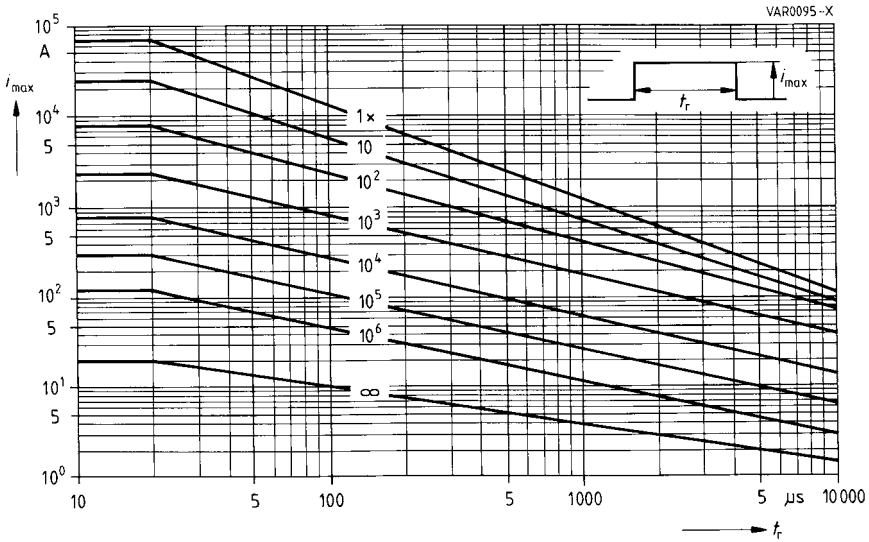
SIOV-B60K130 ... K150

SIOV Metal Oxide Varistors

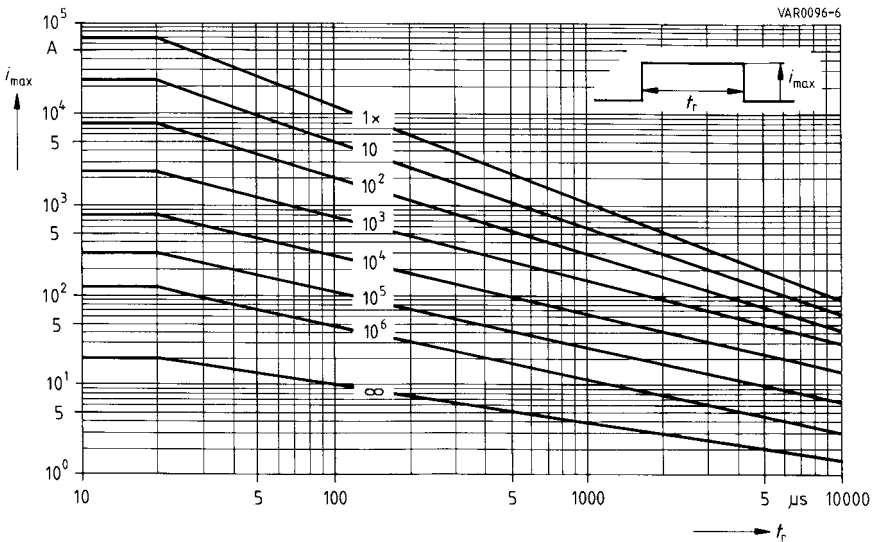
Derating Curves

Maximum surge current

$i_{\max} = f(f_r)$, pulse train – for explanation of the derating curves refer to section 1.8.1)



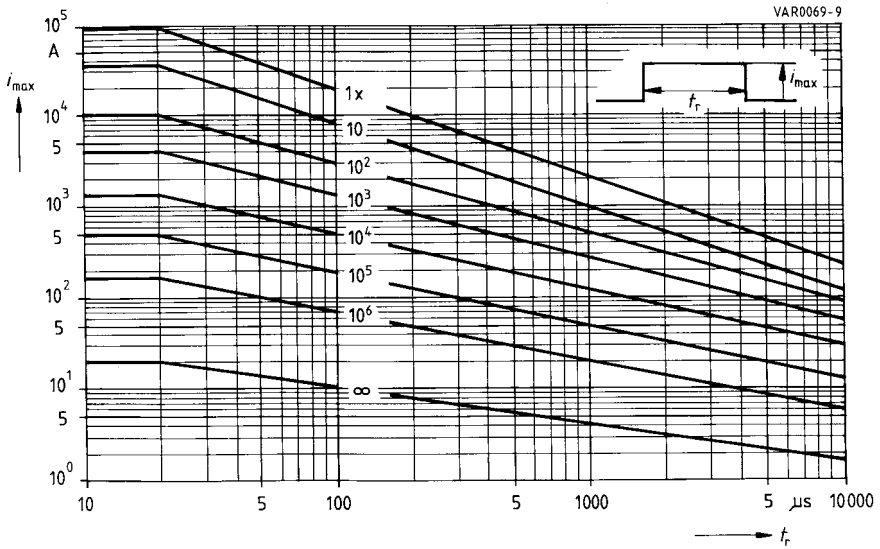
SIOV-B60K230 ... K460



SIOV-B60K550 ... K1000

Maximum surge current

$i_{max} = f(t_r, \text{ pulse train } - \text{ for explanation of the derating curves refer to section 1.8.1})$



SIOV-B80K130 ... K1100

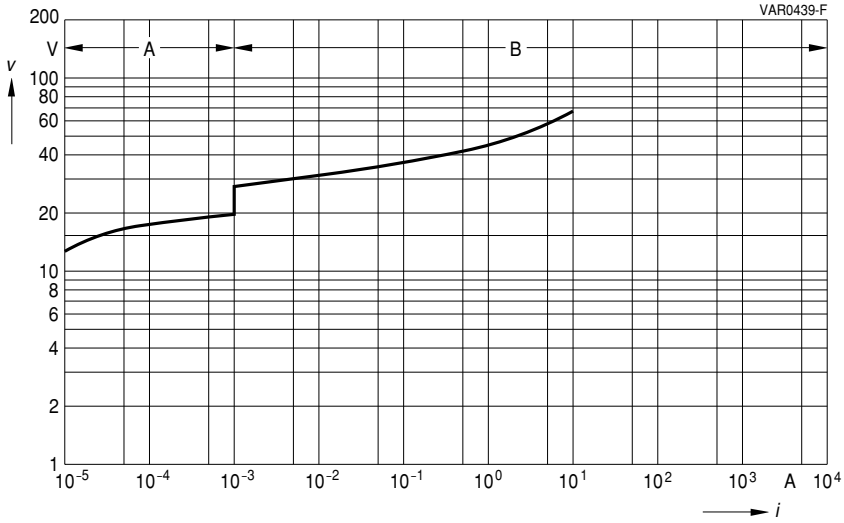
SIOV Metal Oxide Varistors

V/I Characteristics

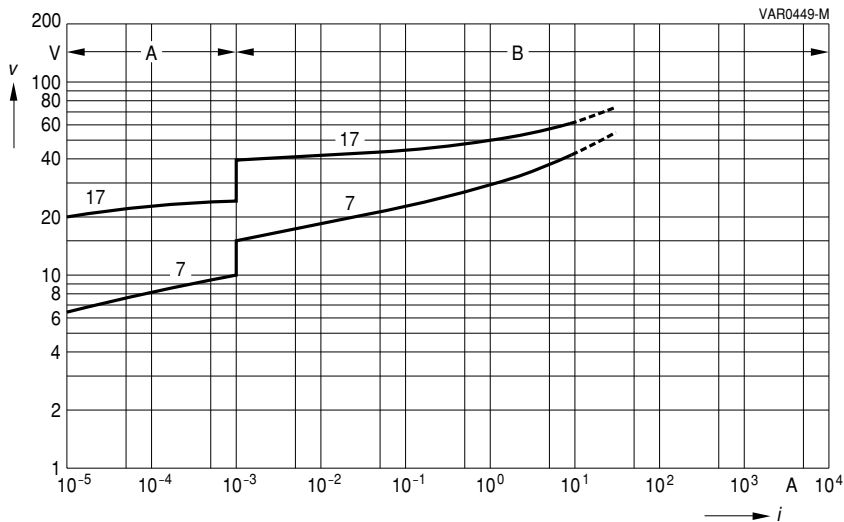
$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case varistor tolerances



SIOV-CT/CN0402L14G(K2)



SIOV-CA06P4M7GK2

SIOV-CA06P4S17ALCGK2

SIOV-CA05P4S17ALCGK2

SIOV-CA04P2S17ALCGK2

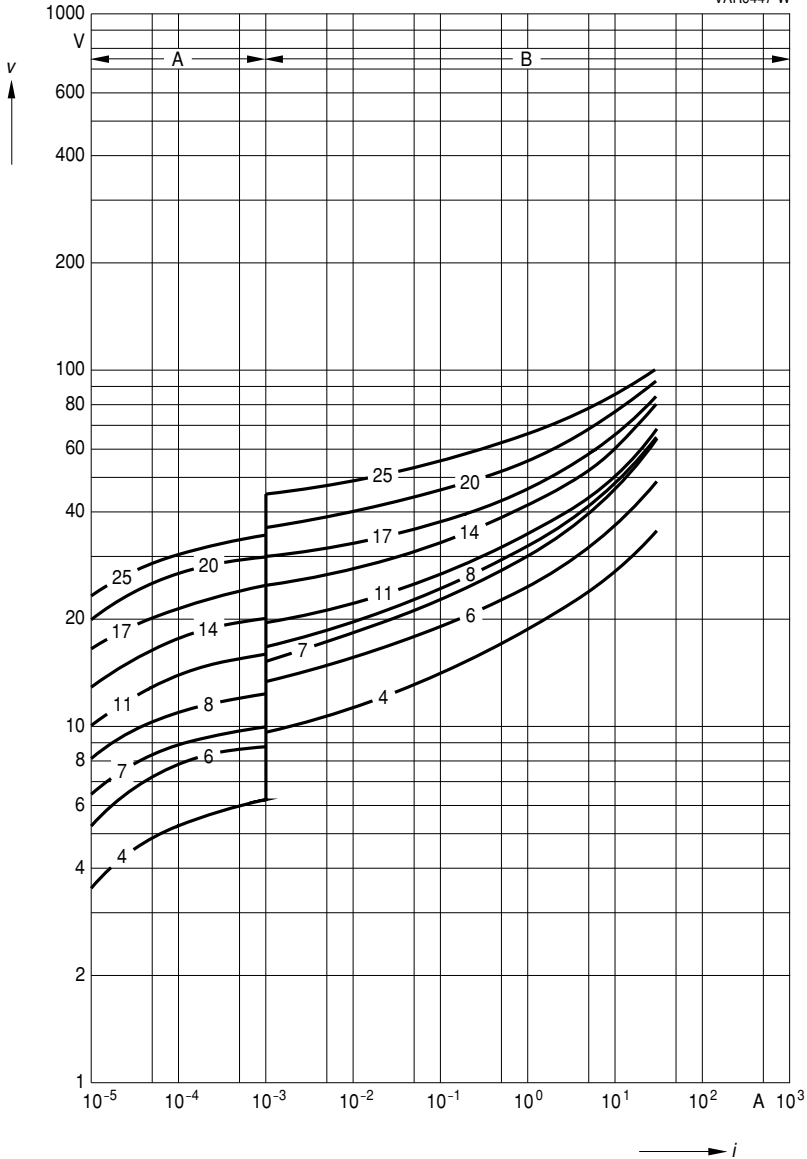
SIOV Metal Oxide Varistors

V/I Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case varistor tolerances
VAR0447-W



SIOV-CT/CN0603M4G ... K25G

SIOV-CT/CN0603K17LCG

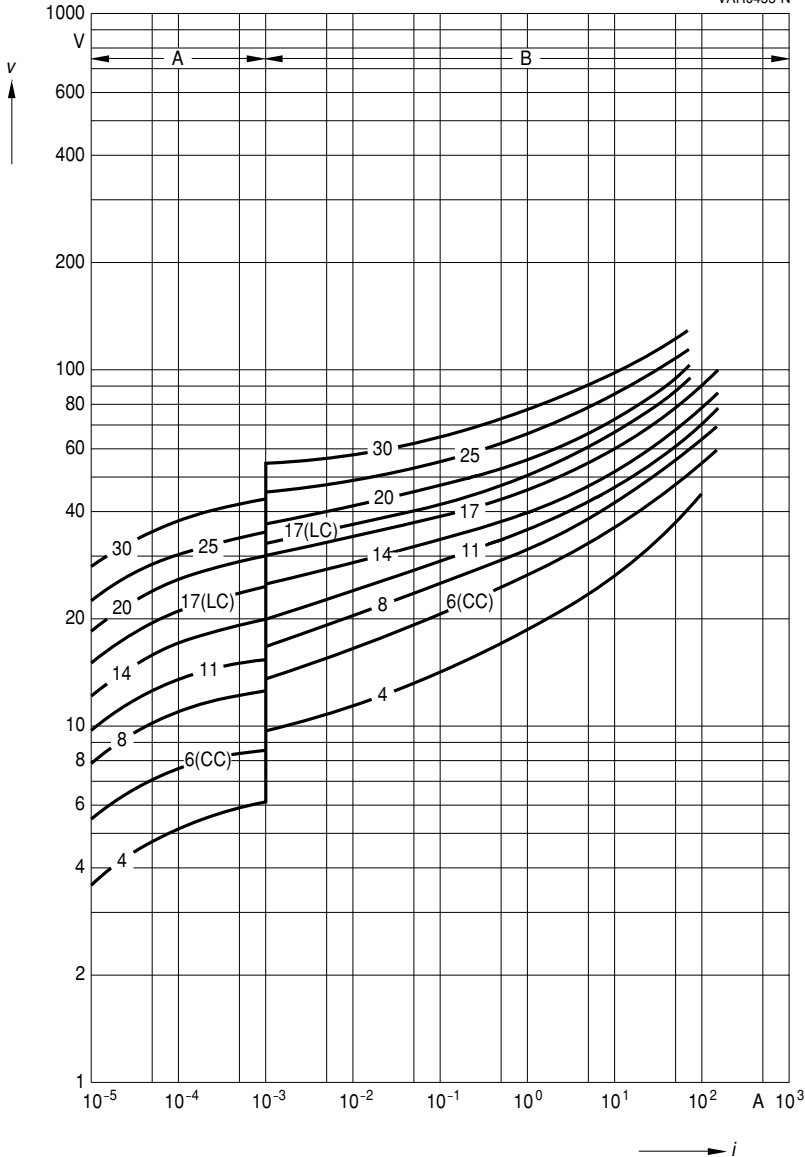
SIOV Metal Oxide Varistors

V/I Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

for worst-case varistor tolerances
VAR0455-N



SIOV-CT/CN0805M4G ... K30G

SIOV-CT/CN0805K17LCG

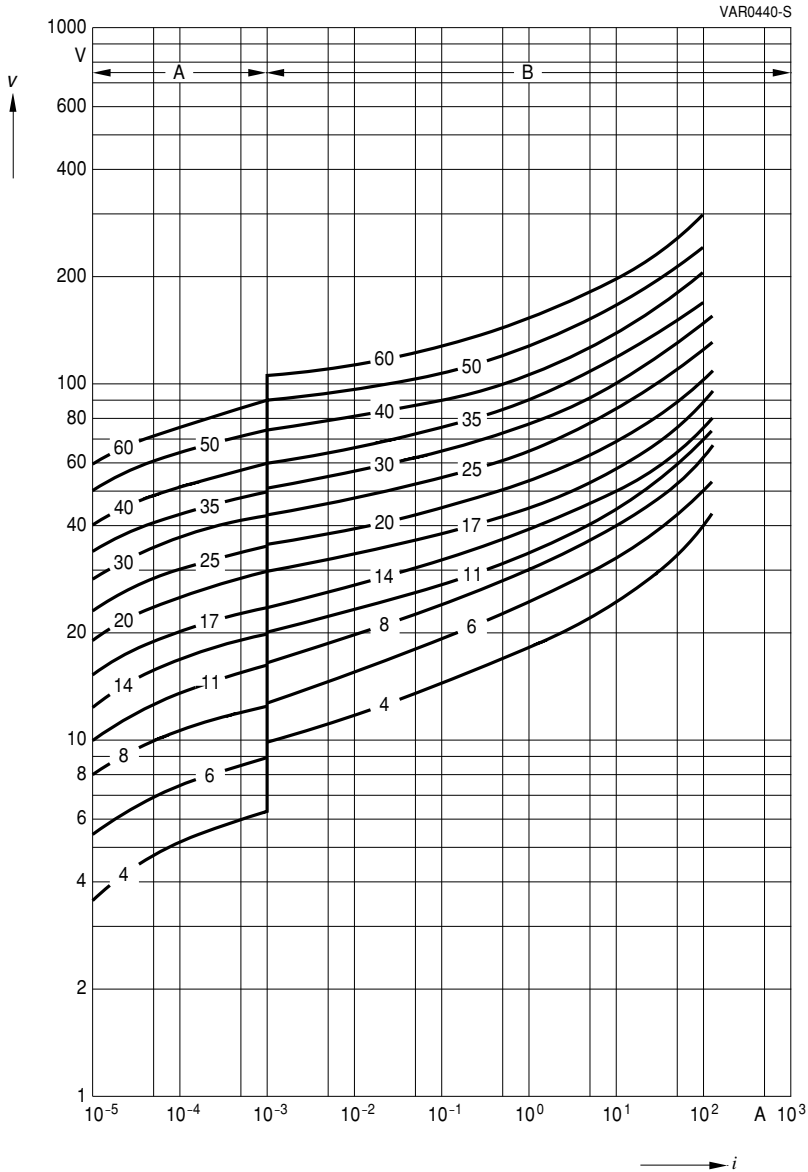
SIOV-CT/CN0805M6CCG

SIOV Metal Oxide Varistors
V/I Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
 B = Protection level

{ for worst-case varistor tolerances



SIOV-CT/CN1206M4G ... K60G

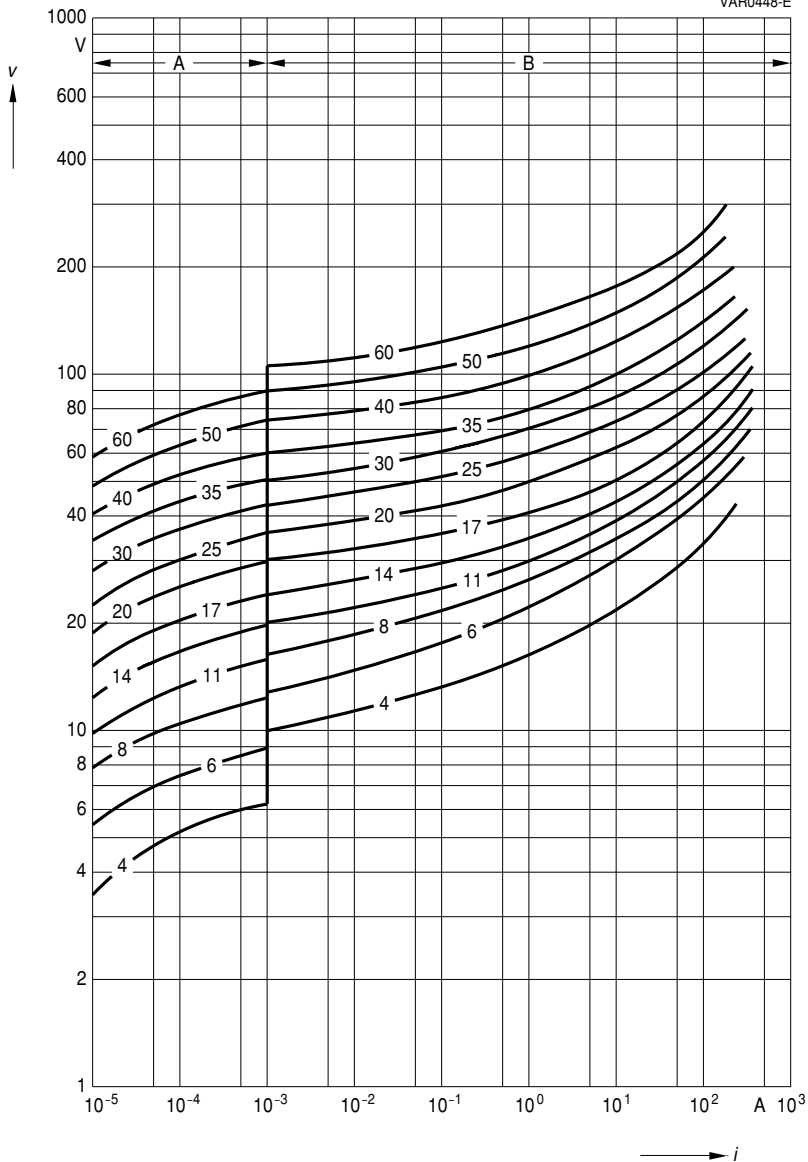
SIOV Metal Oxide Varistors

V// Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case varistor tolerances



SIOV-CT/CN1210M4G ... K60G

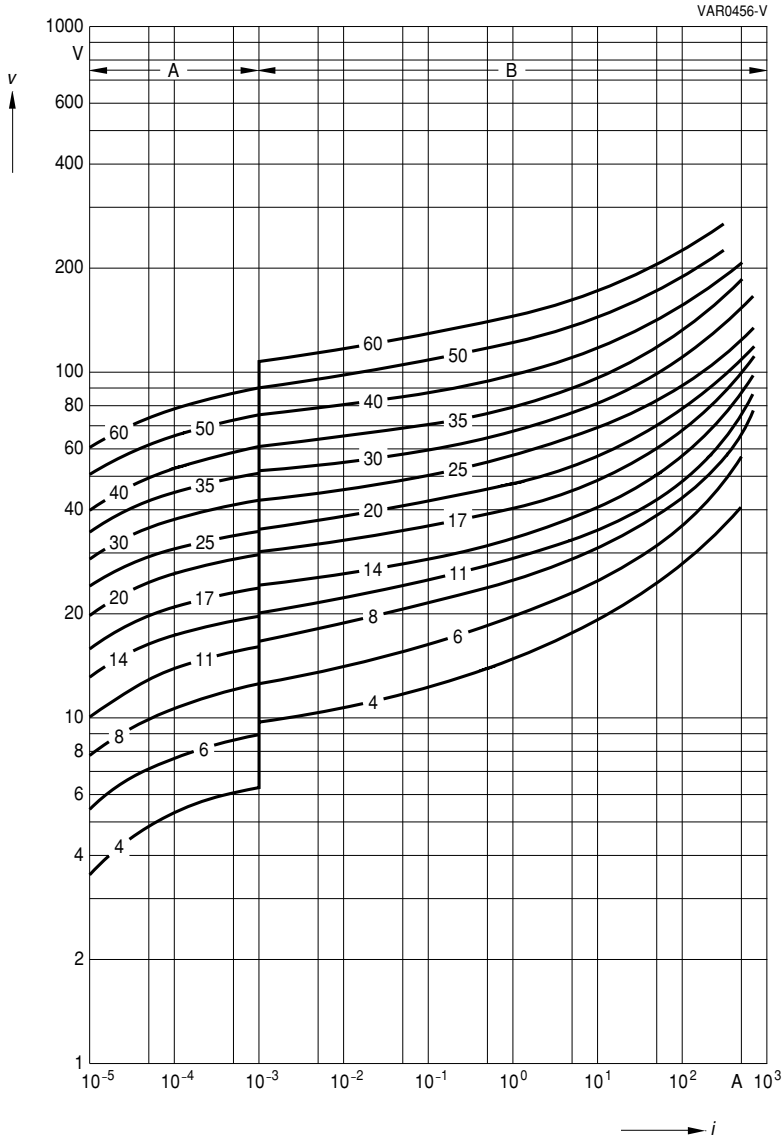
SIOV Metal Oxide Varistors

V// Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

for worst-case varistor tolerances



SIOV-CT/CN1812M4G ... K60G
SHCV-SR1K20M ... X/Z $\hat{=}$ 1812

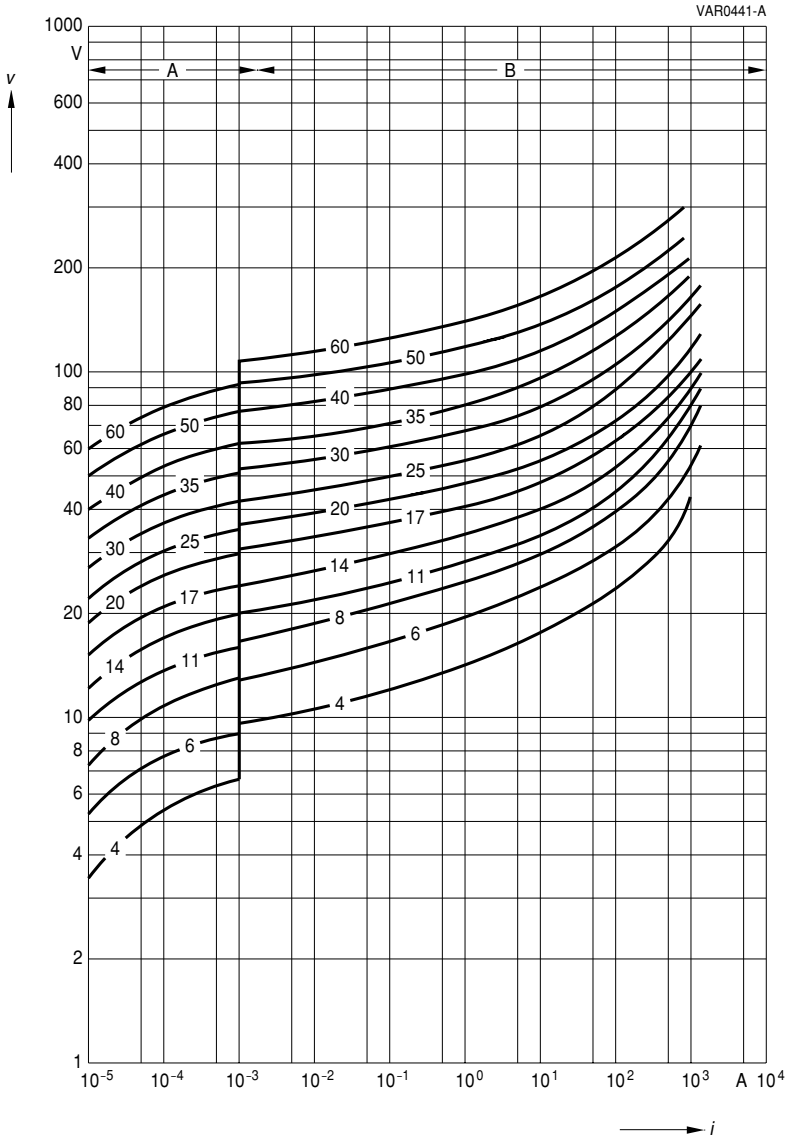
SIOV Metal Oxide Varistors

V// Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case varistor tolerances



SIOV-CT/CN2220M4G ... K60G

SIOV-CT/CN2220K25G ... K30AUTO(E2)G(2)

SHCV-SR2K20M ... X/Z $\hat{=}$ 2220

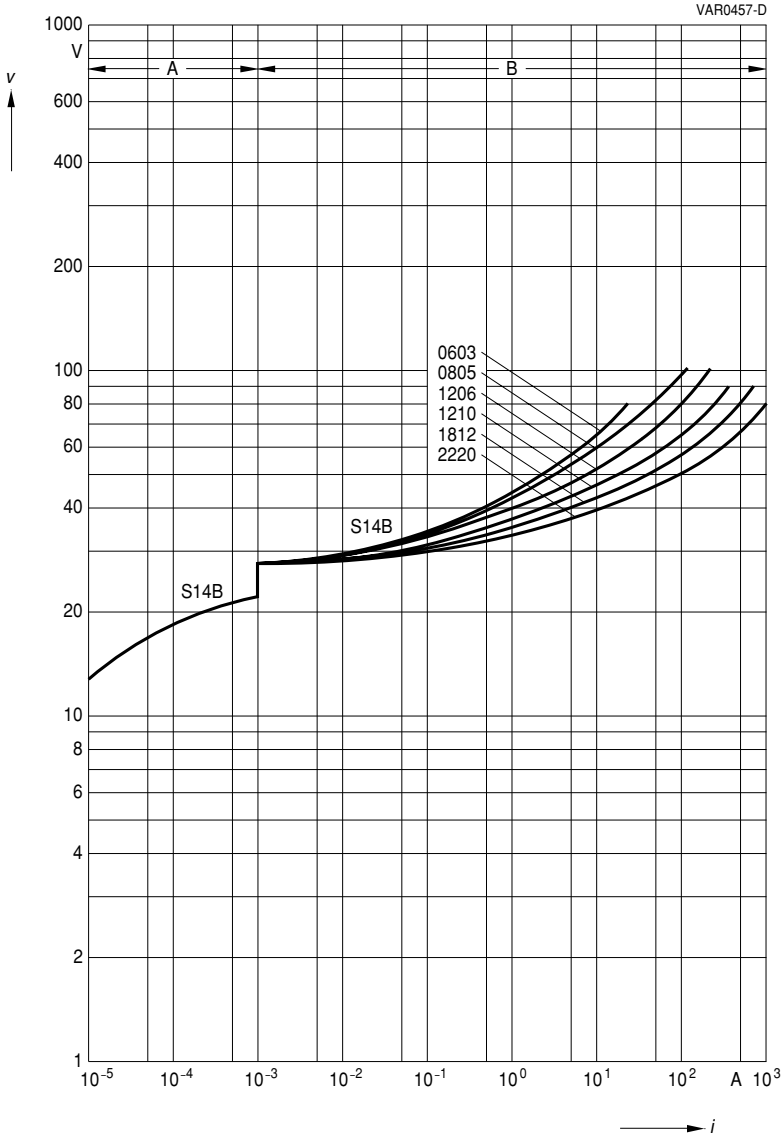
SIOV Metal Oxide Varistors

V/I Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
 B = Protection level

for worst-case varistor tolerances



SIOV-CT/CN0603S14BAUTOG ... 2220S14BAUTOG
 SHCV-SR1S14B ... X/Z $\hat{=}$ 1812

SIOV-CN2220S14BAUTOE2G2
 SHCV-SR2S14B ... X/Z $\hat{=}$ 2220

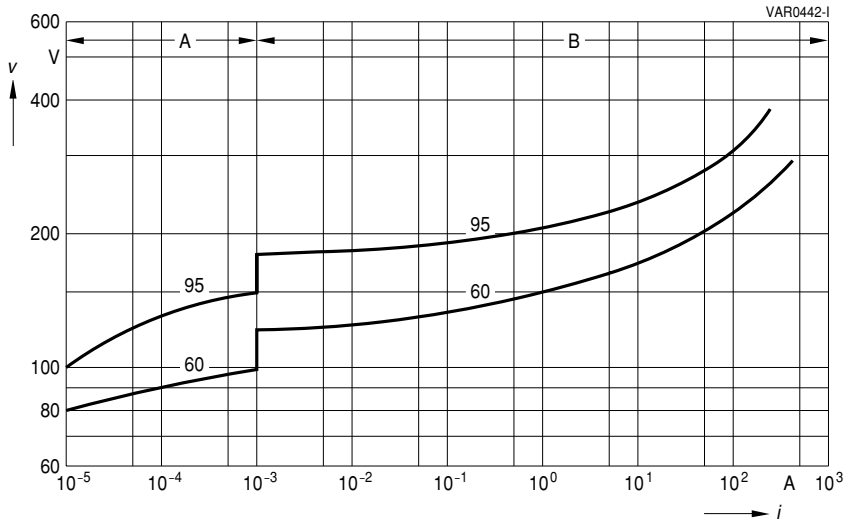
SIOV Metal Oxide Varistors

V/I Characteristics

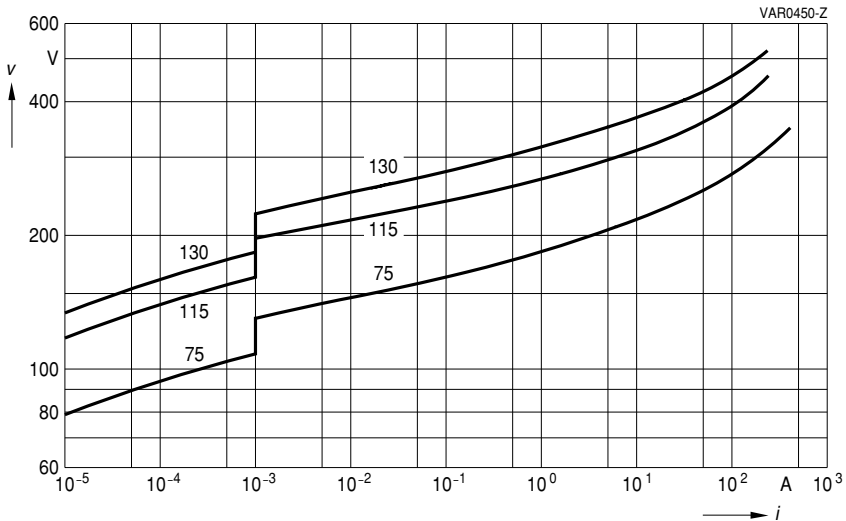
$v = f(i)$ – for explanation of the characteristics
refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case
varistor tolerances



SIOV-CT/CN1812S60AG2 ... S95AG2



SIOV-CT/CN1812K75G2 ... K130G2

SIOV Metal Oxide Varistors

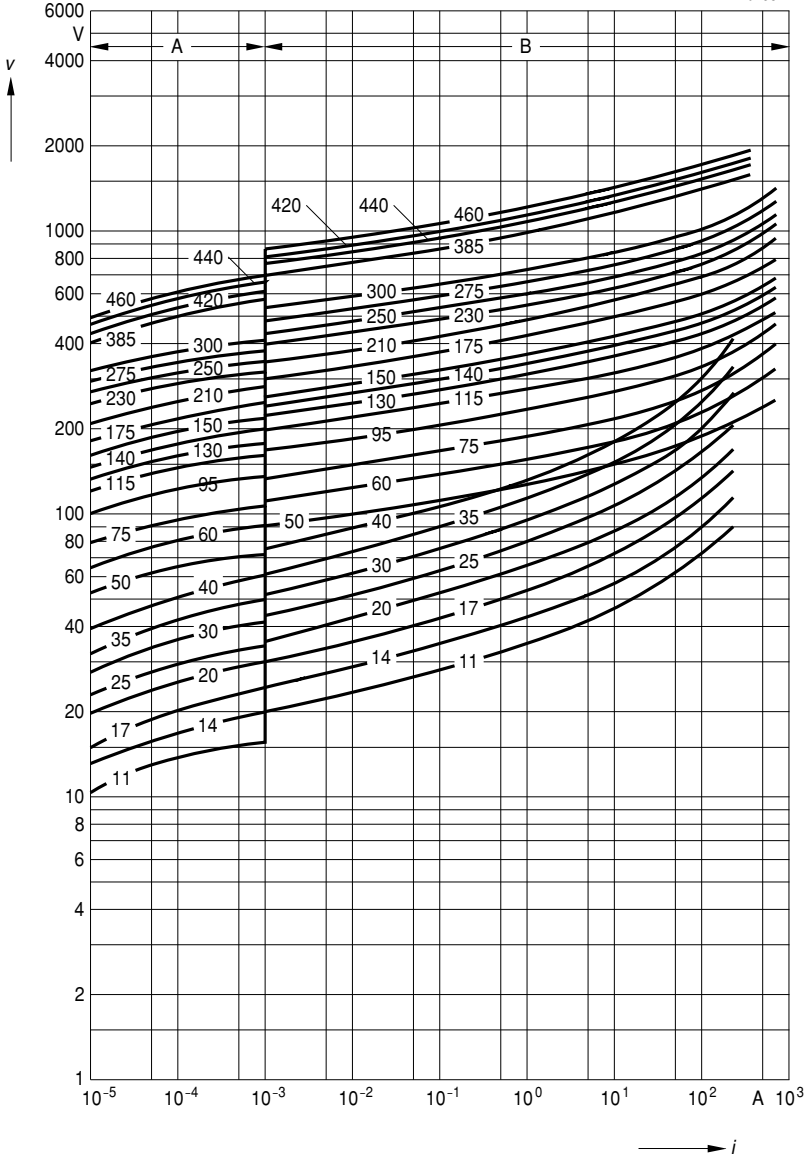
V// Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

for worst-case varistor tolerances

VAR0458-L



SIOV-S05 ... (E2)

SIOV-CU3225 ... (AUTO)G2

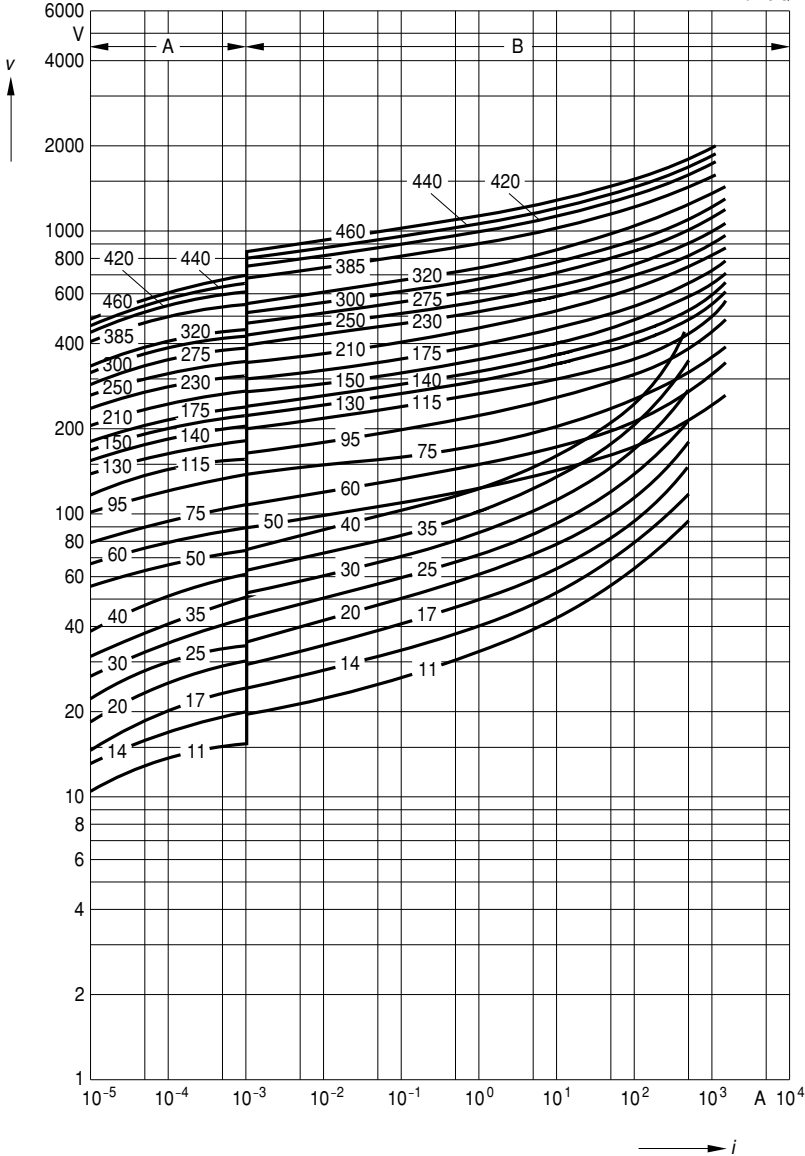
SIOV Metal Oxide Varistors
V/I Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
 B = Protection level

for worst-case varistor tolerances

VAR0443-Q



SIOV-S07 ... (D1)(E2)

SIOV-CU4032 ... (AUTO)G2

SIOV Metal Oxide Varistors

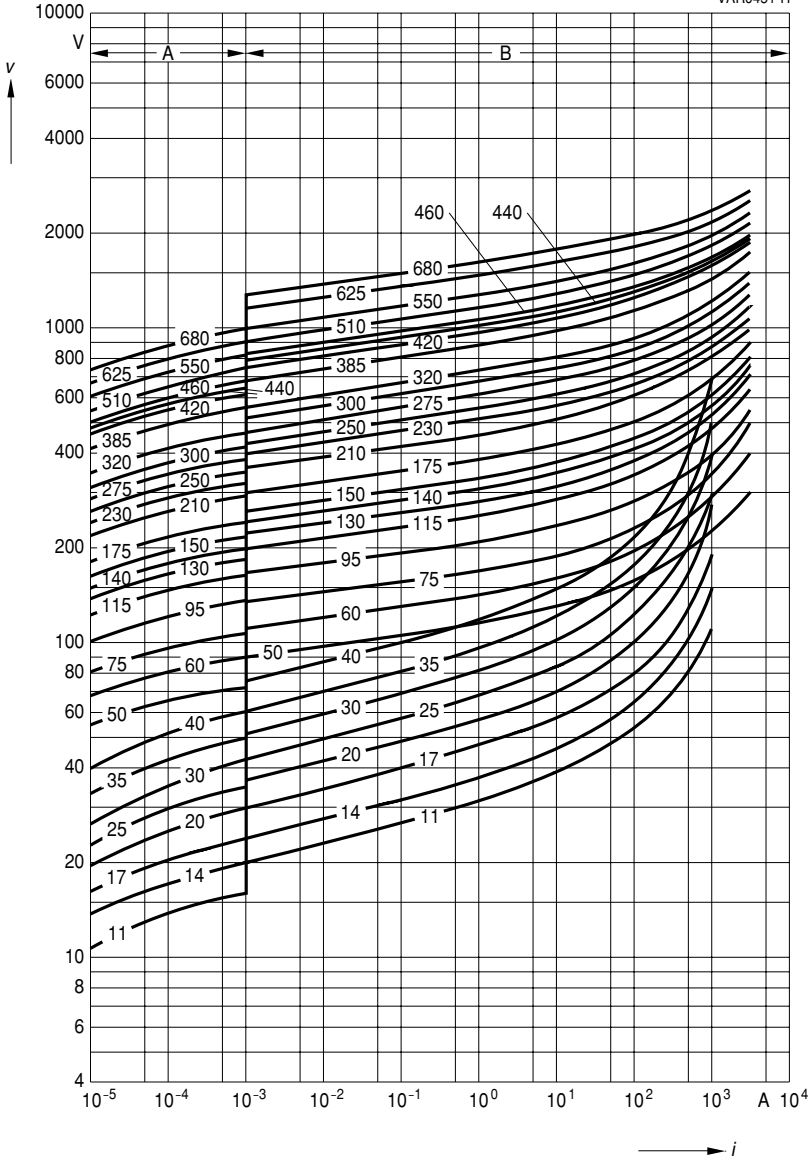
V/I Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case varistor tolerances

VAR0451-H



SIOV-S10 ... (AUTO)(D1)(E2)

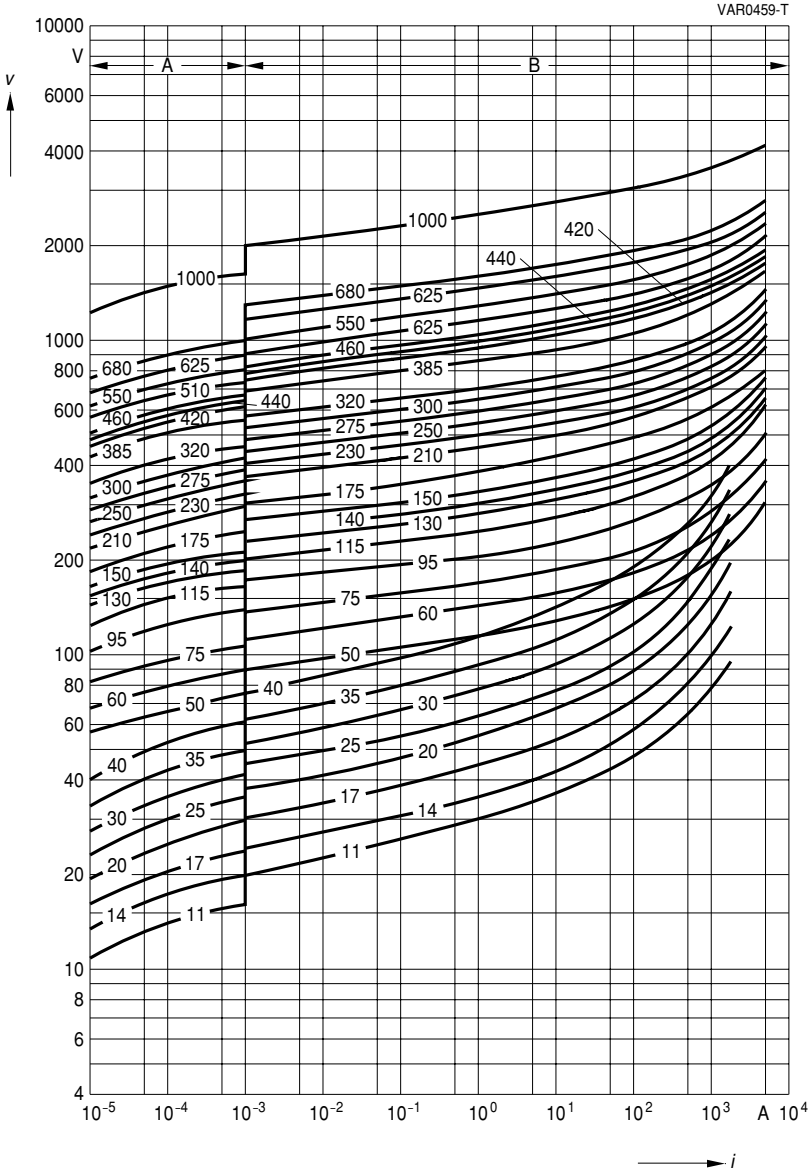
SIOV Metal Oxide Varistors

V/I Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case varistor tolerances



SIOV-S14 ... (AUTO)(D1)(E2)

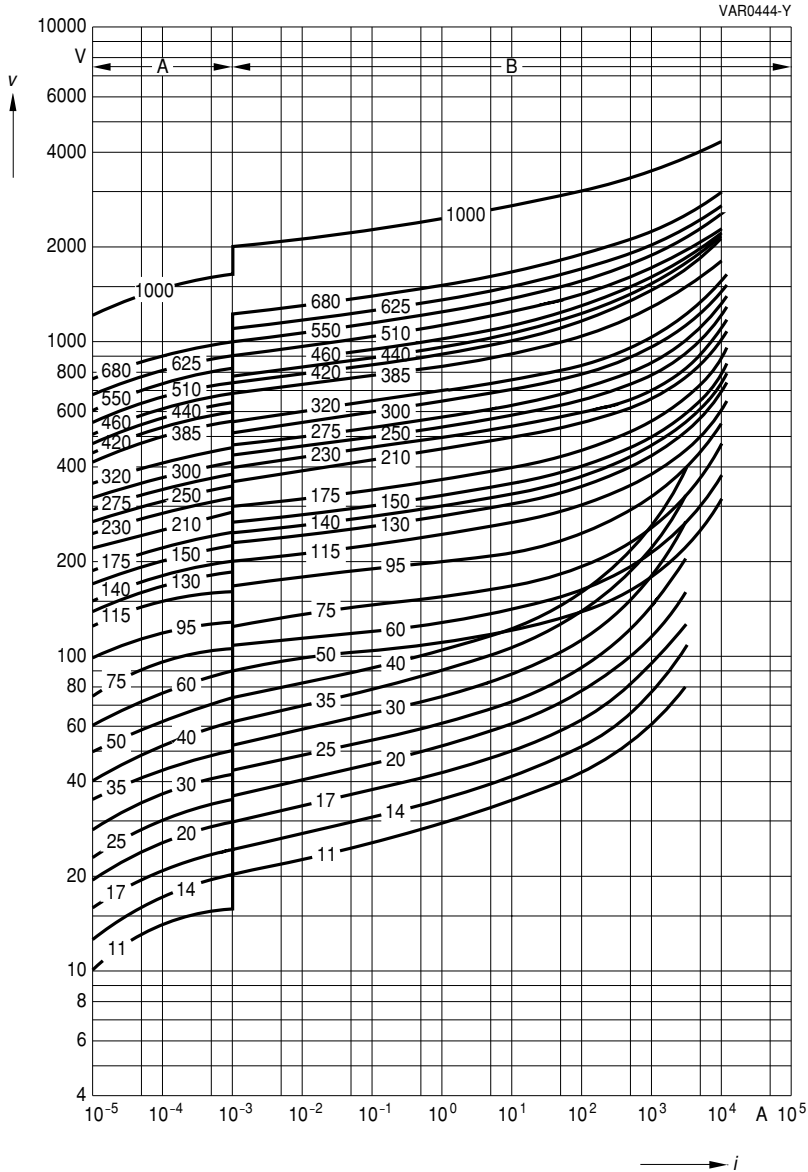
SIOV Metal Oxide Varistors

V// Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case varistor tolerances



SIOV-S20 ... (AUTO)(E2)(E3)

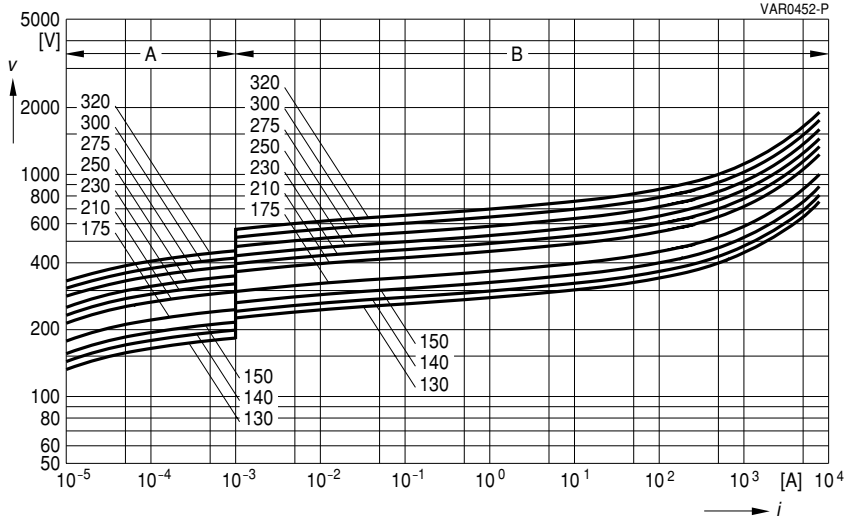
SIOV Metal Oxide Varistors

V/I Characteristics

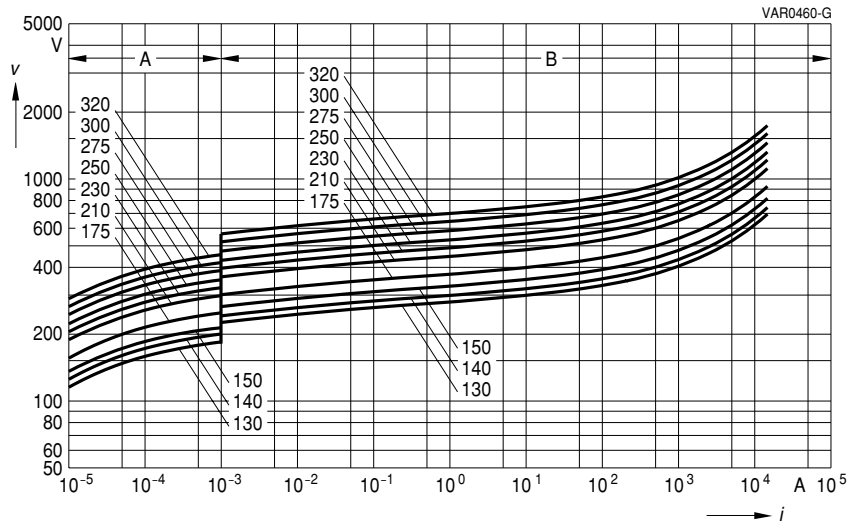
$v = f(i)$ – for explanation of the characteristics
refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case
varistor tolerances



SIOV-Q14



SIOV-Q20

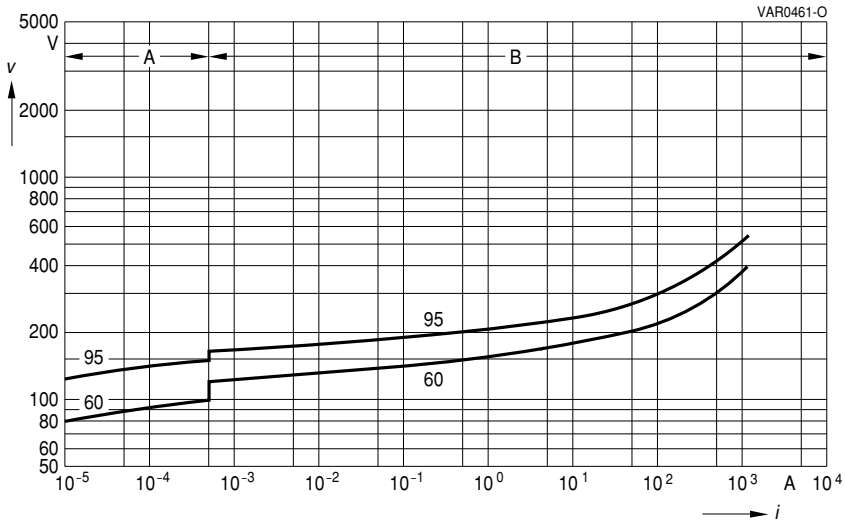
SIOV Metal Oxide Varistors

V/I Characteristics

$v = f(i)$ – for explanation of the characteristics
refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case
varistor tolerances



SIOV-S07S60A ... S95AG2

SIOV-CU4032S60A ... S95AG2

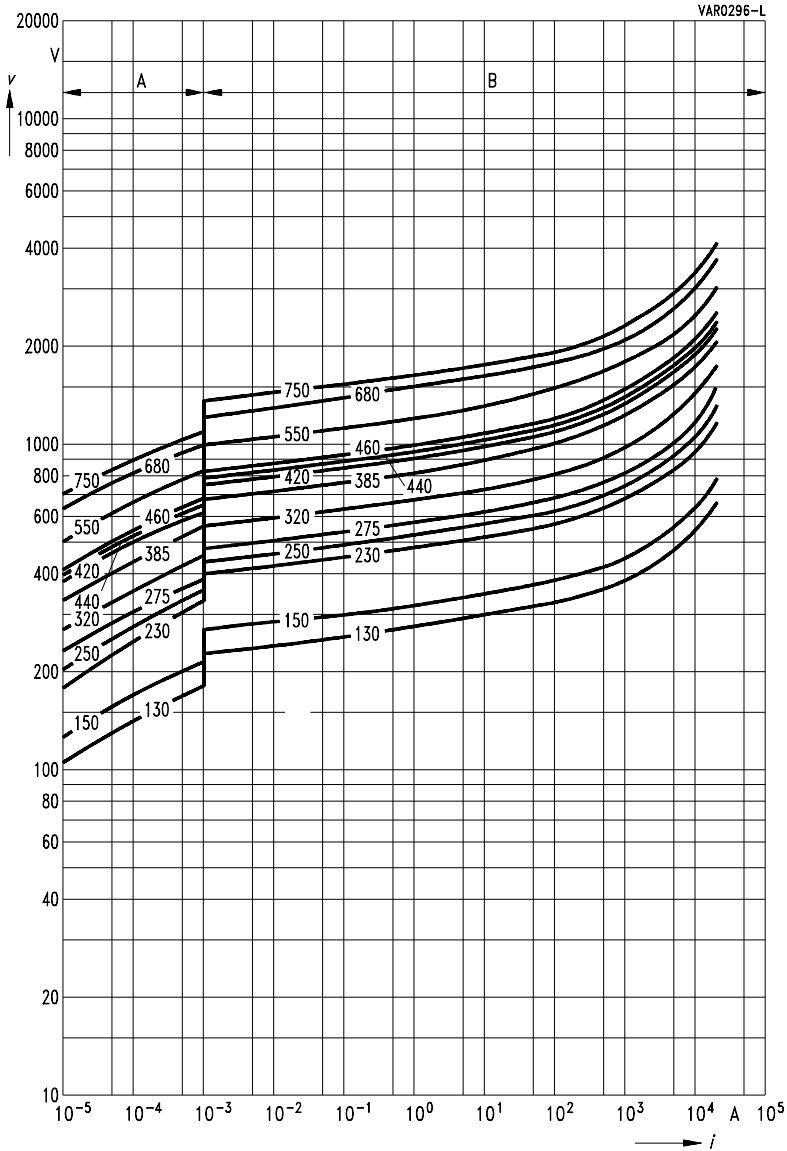
SIOV Metal Oxide Varistors

V/I Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case varistor tolerances



SIOV-B32K130 ... K750

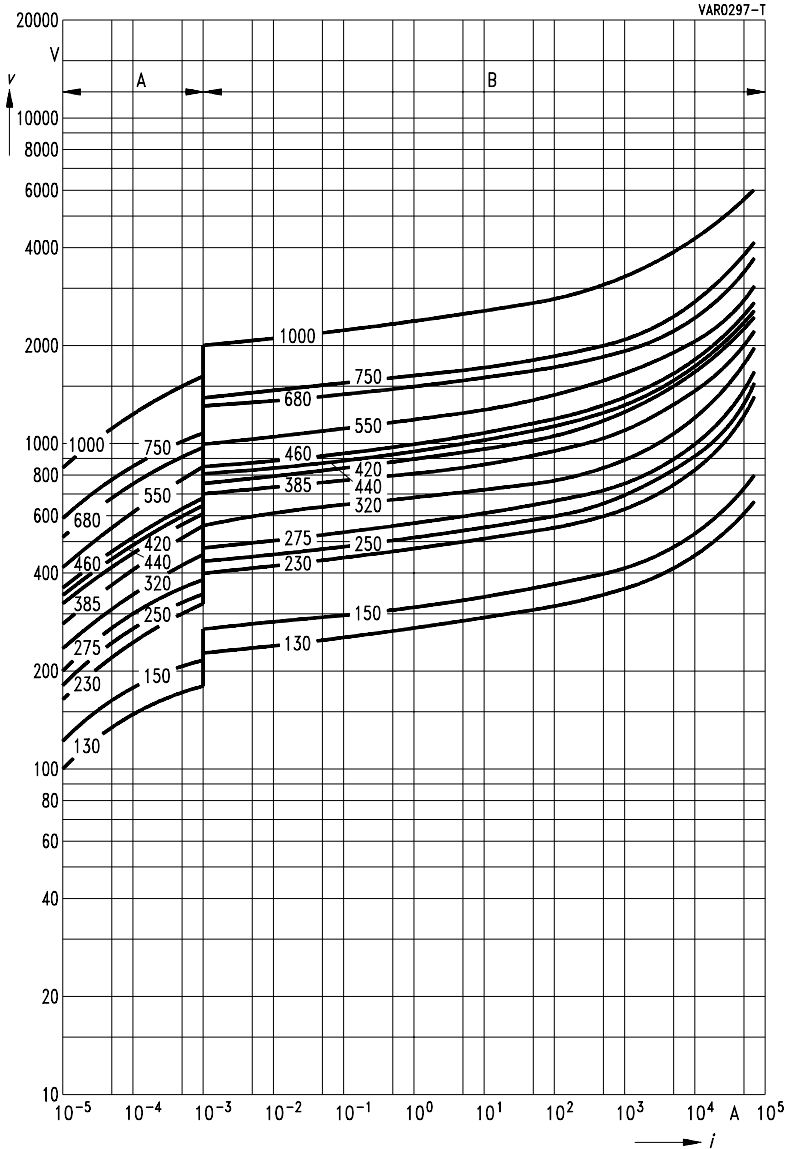
SIOV Metal Oxide Varistors

VII Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

for worst-case varistor tolerances



SIOV-B60K130 ... K1000

SIOV Metal Oxide Varistors

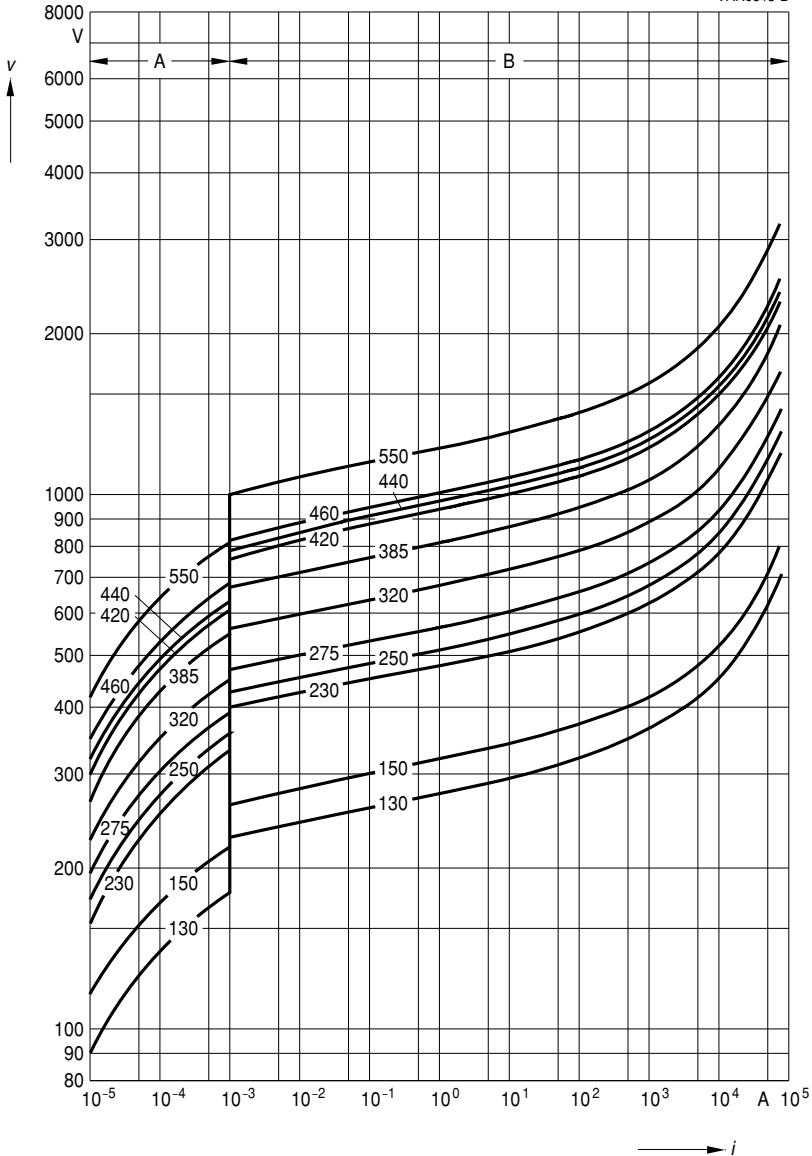
V// Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case varistor tolerances

VAR0513-B



SIOV-LS50K130PK2 ... K550PK2

SIOV-LS50K130P ... K550P

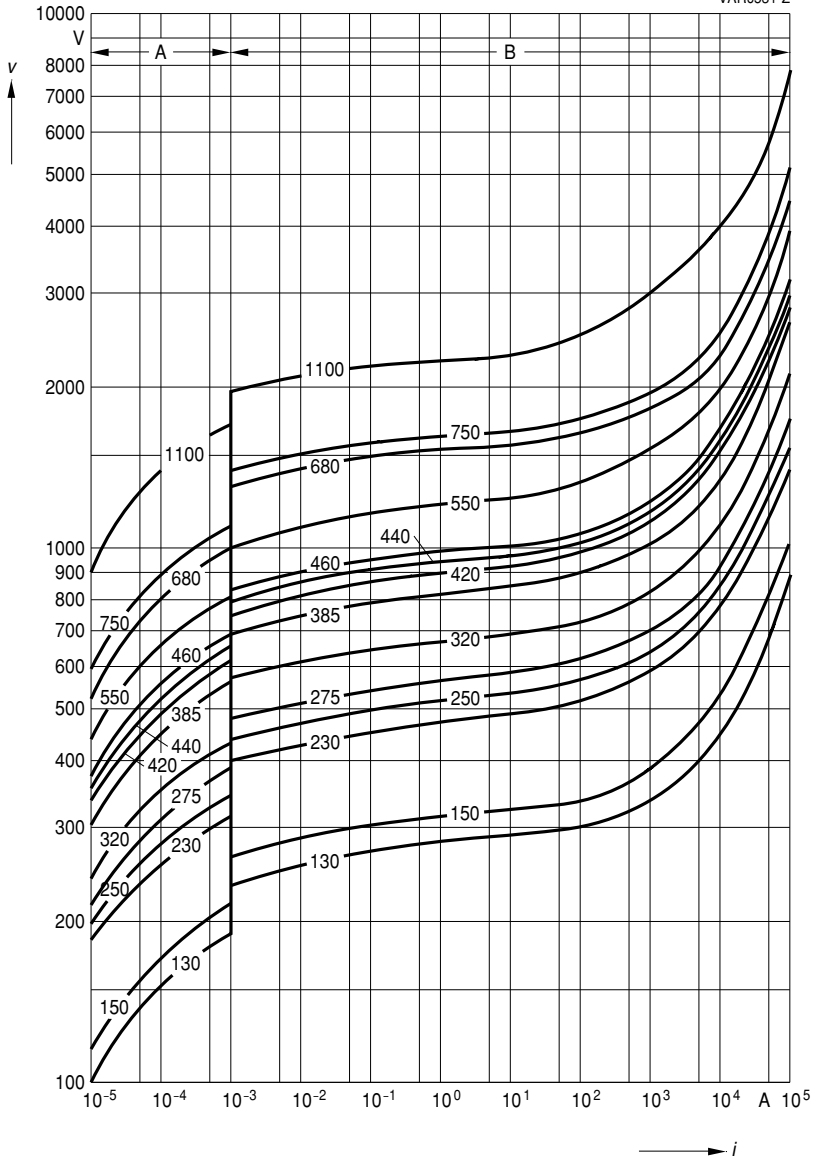
SIOV Metal Oxide Varistors

V// Characteristics

$v = f(i)$ – for explanation of the characteristics refer to section 1.6.3

A = Leakage current
B = Protection level

{ for worst-case varistor tolerances



SIOV-B80K130 ... K1100

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