

Disk Varistors, SR Standard

Construction

- Rectangular varistor element in multilayer technology
- Coating: epoxy resin, flame-retardant to UL 94 V-0
- Terminals: tinned copper wire

Features

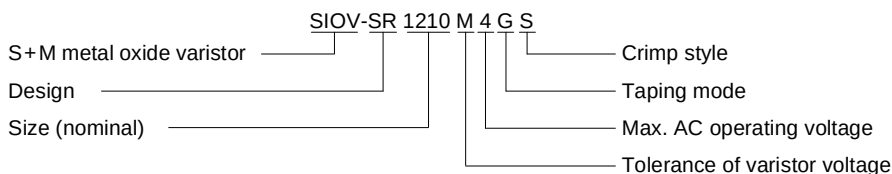
- Electrical equivalents to CN types
- PSpice models

Taping

- All types available on tape,
for ordering information [see page 148](#) ff

Type designation

Detailed description of coding system [on page 33](#)



General technical data

Climatic category	40/85/56	in accordance with IEC 68-1
LCT	– 40 °C	
UCT	+ 85 °C	
Damp heat, steady state (93 % r.h., 40 °C)	56 days	in accordance with IEC 68-2-3
Operating temperature	– 40 ... + 85 °C	in accordance with CECC 42 000
Storage temperature	– 40 ... + 125 °C	
Electric strength	≥ 1,0 kV	in accordance with CECC 42 000
Insulation resistance	≥ 1,0 GΩ	in accordance with CECC 42 000
Response time	< 25 ns	



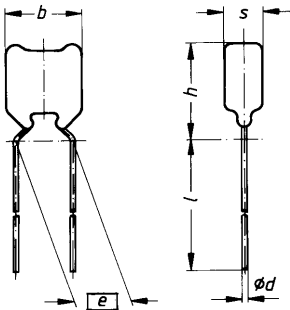
Standard

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

Type (untaped) SIOV-	Ordering code	V_{RMS} V	V_{DC} V	i_{max} 8/20 μ s A	W_{max} (2 ms) J	P_{max} W
SR1210M4S	Q69535-R40-M	4	5,5	250	0,4	0,01
SR2220M4S	Q69545-R40-M	4	5,5	1000	1,4	0,02
SR1210M6S	Q69535-R60-M	6	8	300	0,7	0,01
SR2220M6S	Q69545-R60-M	6	8	1200	3,6	0,02
SR1210L8S	Q69535-R80-L	8	11	400	1,0	0,01
SR2220L8S	Q69545-R80-L	8	11	1200	4,2	0,02

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
SR1210M4S	8	± 20	17	2,5	5000	178	200
SR2220M4S	8	± 20	17	10,0	24000	181	202
SR1210M6S	11	± 20	25	2,5	4000	178	200
SR2220M6S	11	± 20	25	10,0	20000	181	202
SR1210L8S	15	± 15	30	2,5	3000	179	200
SR2220L8S	15	± 15	30	10,0	16000	181	202



Weight:
SR1210: approx. 0,3 g
SR2220: approx. 0,5 g

VAR0003 - L

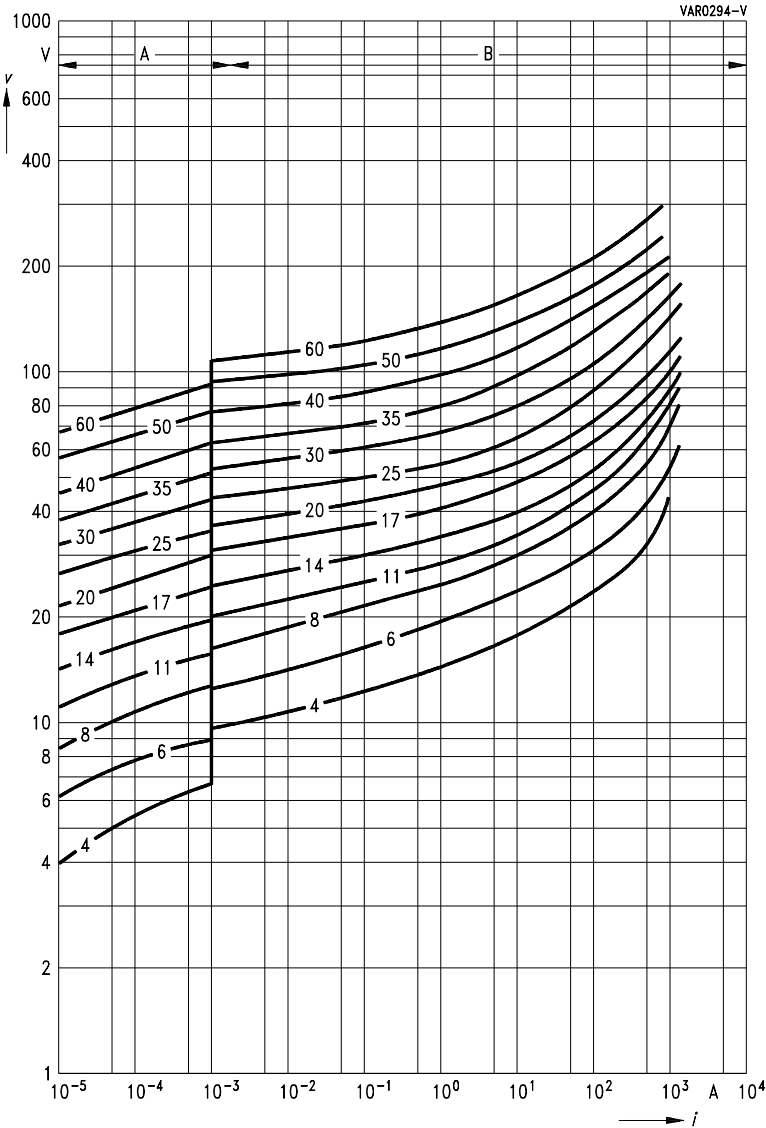
Dimensions

Type	$e \pm 1$ mm	$b_{\max}$ mm	$s_{\max}$ mm	$h_{\max}$ mm	$l_{\min}$ mm	d mm
SIOV-SR1210M4S	5,0	5,5	3,1	6,5	30,0	0,5
SIOV-SR2220M4S	5,0	7,8	3,8	9,0	30,0	0,5
SIOV-SR1210M6S	5,0	5,5	3,1	6,5	30,0	0,5
SIOV-SR2220M6S	5,0	7,8	3,8	9,0	30,0	0,5
SIOV-SR1210L8S	5,0	5,5	3,1	6,5	30,0	0,5
SIOV-SR2220L8S	5,0	7,8	3,8	9,0	30,0	0,5

V/I Characteristics

$$v = f(i)$$

A = Leakage current for worst-case
B = Protection level varistor tolerances

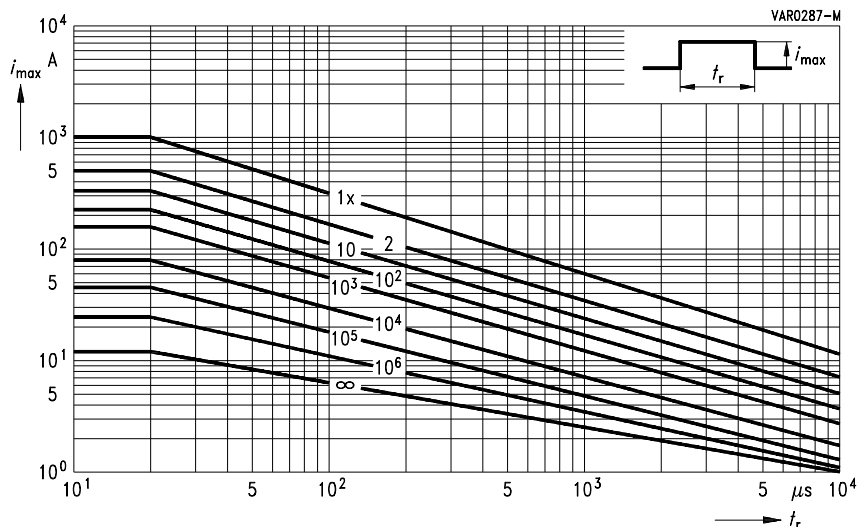


SIOV-CN2220M4G ... K60G
SIOV-CN2220K30AUTOG

SHCV-SR2K20M ... X/Z Δ 2220
SIOV-SR2220M4S, M6S, L8S

Maximum surge current

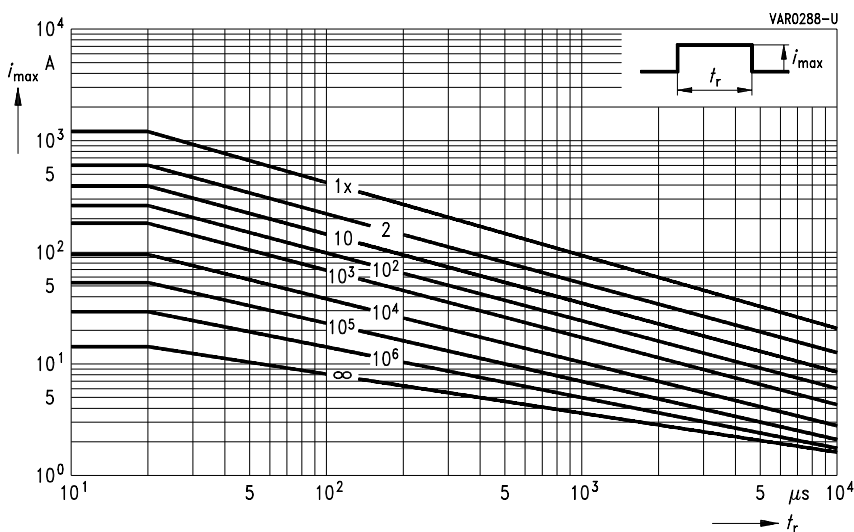
$$i_{\max} = f(t_r, \text{pulse train})$$



SIOV-CN2220M4G

SIOV-CN2220K35G ... K40G

SIOV-SR2220M4S



SIOV-CN2220M6G ... K30G

SIOV-CN2220S14BAUTOG

SIOV-CN2220K30AUTOG

SIOV-SR2220M6S ... L8S

SIOV-CN2220S14BAUTOE2G2

SIOV-SR2220S14BAUTOS

SHCV-SR2 ... X/Z