SMD Varistors

MLV; Standard Series

SMD

Construction

- Multilayer technology
- Termination: nickel barrier (CT series) or silver palladium (CN series) or silver platinum (only for CN0402 … K2)
- No plastic or epoxy encapsulation assures better than UL 94 V-0 flammability rating

Features

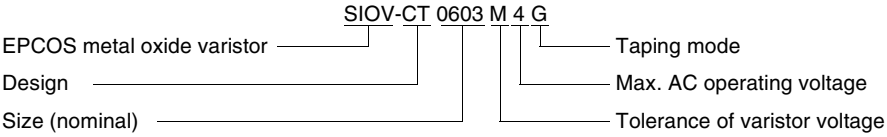
- Sizes 0402 … 2220
- Surge currents up to 1200 A
- Operating temperatures up to 125 °C
- Good solderability
- Suitable for ESD protection
- Bidirectional clamping
- Types with controlled capacitance available
- PSpice models

Taping

- Supply on 8/12-mm tape, for tape dimensions see pages 154/155, for reel dimensions and packing units see page 157, chapter *"SMD Varistors: Taping"*

Type designation

Detailed description of coding system on page 39, chapter *"General Technical Information"*



General technical data

Climatic category LCT UCT	55/125/56 (55/85/56) – 55 °C + 85 °C (CT/CN0402 … 0603) + 125 °C (CT/CN0805 … 2220)		in acc. with IEC 60068-1
Damp heat, steady state (93 % r.h., 40 °C)	56 days		in acc. with IEC 60068-2-3
Operating temperature	– 55 … + 85 °C	CT/CN0402 … 0603	in acc. with CECC 42 000
	– 55 … + 125 °C	CT/CN0805 … 2220	in acc. with CECC 42 000
Storage temperature[1)]	– 55 … + 150 °C	CT/CN0805 … 2220	
	– 55 … + 125 °C	CT/CN0402 … 0603	
Response time	< 0,5 ns		
Solderability	235 °C, 2 s		in acc. with IEC 60068-2-58
Resistance to soldering heat	260 °C, 10 s		in acc. with IEC 60068-2-58

1) For mounted parts (storage conditions for unused parts on reel see page 38, chapter *"General Technical Information"*)

Maximum ratings (0402 … 0603: T_A = 85 °C; 0805 … 2220: T_A = 125 °C)

Type	Ordering code	V_{RMS}	V_{DC}	i_{max} 8/20 µs	W_{max} (2 ms)	P_{max}
SIOV-		V	V	A	J	W
CT0603M4G	B72500T0040M060	4	5,5	30	0,1	0,003
CT0805M4G	B72510T0040M062	4	5,5	100	0,1	0,005
CT1206M4G	B72520T0040M062	4	5,5	150	0,3	0,008
CT1210M4G	B72530T0040M062	4	5,5	250	0,4	0,010
CT1812M4G	B72580T0040M062	4	5,5	500	0,8	0,015
CT2220M4G	B72540T0040M062	4	5,5	1000	1,4	0,020
CT0603M6G	B72500T0060M060	6	8	30	0,1	0,003
CT0805M6G	B72510T0060M062	6	8	120	0,2	0,005
CT0805M6CCG	B72510T5060M062	6	8	120	0,2	0,005
CT1206M6G	B72520T0060M062	6	8	200	0,4	0,008
CT1210M6G	B72530T0060M062	6	8	300	0,7	0,010
CT1812M6G	B72580T0060M062	6	8	500	1,0	0,015
CT2220M6G	B72540T0060M062	6	8	1200	3,6	0,020
CT0603M7G	B72500T0070M060	7	9	30	0,1	0,003
CT0603L8G	B72500T0080L060	8	11	30	0,1	0,003
CT0805L8G	B72510T0080L062	8	11	120	0,2	0,005
CT1206L8G	B72520T0080L062	8	11	200	0,5	0,008
CT1210L8G	B72530T0080L062	8	11	400	1,0	0,010
CT1812L8G	B72580T0080L062	8	11	800	1,8	0,015
CT2220L8G	B72540T0080L062	8	11	1200	4,2	0,020
CT0603K11G	B72500T0110K060	11	14	30	0,2	0,003
CT0805K11G	B72510T0110K062	11	14	120	0,2	0,005
CT1206K11G	B72520T0110K062	11	14	200	0,5	0,008
CT1210K11G	B72530T0110K062	11	14	400	1,2	0,010
CT1812K11G	B72580T0110K062	11	14	800	1,9	0,015
CT2220K11G	B72540T0110K062	11	14	1200	5,4	0,020
CT0402L14G	B72590T0140L060	14	16	10	0,01	0,003
CT0603K14G	B72500T0140K060	14	18	30	0,2	0,003
CT0805K14G	B72510T0140K062	14	18	120	0,3	0,005
CT1206K14G	B72520T0140K062	14	18	200	0,5	0,008
CT1210K14G	B72530T0140K062	14	18	400	1,5	0,010
CT1812K14G	B72580T0140K062	14	18	800	2,3	0,015
CT2220K14G	B72540T0140K062	14	18	1200	5,8	0,020

A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).



Characteristics (T_A = 25 °C)

Type	V_v (1 mA)	ΔV_v (1 mA)	Max. clamping voltage v	i	C_{typ} (1 kHz)	L_{typ}	Derating curve	*V/I* characteristic
SIOV-	V	%	V	A	pF	nH	Page	Page
CT0603M4G	8	± 20	19	1,0	200	1,0	238	266
CT0805M4G	8	± 20	19	1,0	700	1,5	238	267
CT1206M4G	8	± 20	17	1,0	1500	1,8	240	268
CT1210M4G	8	± 20	17	2,5	5000	1,8	241	269
CT1812M4G	8	± 20	17	5,0	10000	2,5	242	270
CT2220M4G	8	± 20	17	10,0	24000	3,0	245	271
CT0603M6G	11	± 20	27	1,0	200	1,0	238	266
CT0805M6G	11	± 20	27	1,0	600	1,5	239	267
CT0805M6CCG	11	± 20	27	1,0	1500[1)]	1,5	239	267
CT1206M6G	11	± 20	25	1,0	1200	1,8	240	268
CT1210M6G	11	± 20	25	2,5	4000	1,8	241	269
CT1812M6G	11	± 20	25	5,0	8000	2,5	242	270
CT2220M6G	11	± 20	25	10,0	20000	3,0	245	271
CT0603M7G	12,5	± 20	30	1,0	200	1,0	238	266
CT0603L8G	15	± 15	33	1,0	150	1,0	238	266
CT0805L8G	15	± 15	33	1,0	500	1,5	239	267
CT1206L8G	15	± 15	30	1,0	1000	1,8	240	268
CT1210L8G	15	± 15	30	2,5	3000	1,8	242	269
CT1812L8G	15	± 15	30	5,0	6000	2,5	244	270
CT2220L8G	15	± 15	30	10,0	16000	3,0	245	271
CT0603K11G	18	± 10	35	1,0	100	1,0	238	266
CT0805K11G	18	± 10	35	1,0	400	1,5	239	267
CT1206K11G	18	± 10	33	1,0	800	1,8	240	268
CT1210K11G	18	± 10	33	2,5	2400	1,8	242	269
CT1812K11G	18	± 10	33	5,0	5000	2,5	244	270
CT2220K11G	18	± 10	33	10,0	12000	3,0	245	271
CT0402L14G	23,5	± 15	46	1,0	60[2)]	0,8	237	265
CT0603K14G	22	± 10	40	1,0	100	1,0	238	266
CT0805K14G	22	± 10	40	1,0	350	1,5	239	267
CT1206K14G	22	± 10	38	1,0	700	1,8	240	268
CT1210K14G	22	± 10	38	2,5	2000	1,8	242	269
CT1812K14G	22	± 10	38	5,0	4500	2,5	244	270
CT2220K14G	22	± 10	38	10,0	10000	3,0	245	271

1) C (1 MHz); ± 20 %; 2) C_{typ} (1 MHz)

A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).

Maximum ratings (0402 … 0603: T_A = 85 °C; 0805 … 2220: T_A = 125 °C)

Type	Ordering code	V_{RMS}	V_{DC}	i_{max} 8/20 µs	W_{max} (2 ms)	P_{max}
SIOV-		V	V	A	J	W
CT0603K17G	B72500T0170K060	17	22	30	0,2	0,003
CT0603K17LCG	B72500T2170K060	17	22	10	0,1	0,001
CT0805K17G	B72510T0170K062	17	22	120	0,3	0,005
CT0805K17LCG	B72510T2170K062	17	22	30	0,1	0,004
CT1206K17G	B72520T0170K062	17	22	200	0,6	0,008
CT1210K17G	B72530T0170K062	17	22	400	1,7	0,010
CT1812K17G	B72580T0170K062	17	22	800	2,7	0,015
CT2220K17G	B72540T0170K062	17	22	1200	7,2	0,020
CT0603K20G	B72500T0200K060	20	26	30	0,2	0,003
CT0805K20G	B72510T0200K062	20	26	80	0,3	0,005
CT1206K20G	B72520T0200K062	20	26	200	0,7	0,008
CT1210K20G	B72530T0200K062	20	26	400	1,9	0,010
CT1812K20G	B72580T0200K062	20	26	800	3,0	0,015
CT2220K20G	B72540T0200K062	20	26	1200	7,8	0,020
CT0603K25G	B72500T0250K060	25	31	30	0,3	0,003
CT0805K25G	B72510T0250K062	25	31	80	0,3	0,005
CT1206K25G	B72520T0250K062	25	31	200	1,0	0,008
CT1210K25G	B72530T0250K062	25	31	300	1,7	0,010
CT1812K25G	B72580T0250K062	25	31	800	3,7	0,015
CT2220K25G	B72540T0250K062	25	31	1200	9,6	0,020
CT0805K30G	B72510T0300K062	30	38	80	0,3	0,005
CT1206K30G	B72520T0300K062	30	38	200	1,1	0,008
CT1210K30G	B72530T0300K062	30	38	300	2,0	0,010
CT1812K30G	B72580T0300K062	30	38	800	4,2	0,015
CT2220K30G	B72540T0300K062	30	38	1200	12,0	0,020
CT1206K35G	B72520T0350K062	35	45	100	0,4	0,008
CT1210K35G	B72530T0350K062	35	45	250	2,0	0,010
CT1812K35G	B72580T0350K062	35	45	500	4,0	0,015
CT2220K35G	B72540T0350K062	35	45	1000	7,7	0,020
CT1206K40G	B72520T0400K062	40	56	100	0,5	0,008
CT1210K40G	B72530T0400K062	40	56	250	2,3	0,010
CT1812K40G	B72580T0400K062	40	56	500	4,8	0,015
CT2220K40G	B72540T0400K062	40	56	1000	9,0	0,020

A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).



Characteristics (T_A = 25 °C)

Type	V_v (1 mA)	ΔV_v (1 mA)	Max. clamping voltage v	i	C_{typ} (1 kHz)	L_{typ}	Derating curve	*V/I* characteristic
SIOV-	V	%	V	A	pF	nH	Page	Page
CT0603K17G	27	± 10	46	1,0	100	1,0	238	266
CT0603K17LCG	27	± 10	50	1,0	< 50	1,0	237	266
CT0805K17G	27	± 10	46	1,0	400	1,5	239	267
CT0805K17LCG	27	+22/–8[1)]	50	1,0	< 100	1,0	238	267
CT1206K17G	27	± 10	44	1,0	650	1,8	240	268
CT1210K17G	27	± 10	44	2,5	1800	1,8	242	269
CT1812K17G	27	± 10	44	5,0	4000	2,5	244	270
CT2220K17G	27	± 10	44	10,0	9000	3,0	245	271
CT0603K20G	33	± 10	56	1,0	90	1,0	238	266
CT0805K20G	33	± 10	56	1,0	300	1,5	239	267
CT1206K20G	33	± 10	54	1,0	600	1,8	240	268
CT1210K20G	33	± 10	54	2,5	1500	1,8	242	269
CT1812K20G	33	± 10	54	5,0	3000	2,5	244	270
CT2220K20G	33	± 10	54	10,0	7000	3,0	245	271
CT0603K25G	39	± 10	67	1,0	90[2)]	1,0	238	266
CT0805K25G	39	± 10	67	1,0	250	1,5	239	267
CT1206K25G	39	± 10	65	1,0	550	1,8	240	268
CT1210K25G	39	± 10	65	2,5	1200	1,8	241	269
CT1812K25G	39	± 10	65	5,0	2500	2,5	244	270
CT2220K25G	39	± 10	65	10,0	5000	3,0	245	271
CT0805K30G	47	± 10	77	1,0	200	1,0	239	267
CT1206K30G	47	± 10	77	1,0	500	1,8	240	268
CT1210K30G	47	± 10	77	2,5	1000	1,8	241	269
CT1812K30G	47	± 10	77	5,0	2000	2,5	244	270
CT2220K30G	47	±+ 10	77	10,0	4000	3,0	245	271
CT1206K35G	56	± 10	90	1,0	200	1,8	238	268
CT1210K35G	56	± 10	90	2,5	600	1,8	241	269
CT1812K35G	56	± 10	90	5,0	1200	2,5	242	270
CT2220K35G	56	± 10	90	10,0	2500	3,0	245	271
CT1206K40G	68	± 10	110	1,0	250	1,8	238	268
CT1210K40G	68	± 10	110	2,5	500	1,8	241	269
CT1812K40G	68	± 10	110	5,0	1000	2,5	242	270
CT2220K40G	68	± 10	110	10,0	2000	3,0	245	271

1) Tolerance differs from standard; 2) C_{typ} (1 MHz)

A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).

Maximum ratings (0402 … 0603: T_A = 85 °C; 0805 … 2220: T_A = 125 °C)

Type	Ordering code	V_{RMS}	V_{DC}	i_{max} 8/20 µs	W_{max} (2 ms)	P_{max}
SIOV-		V	V	A	J	W
CT1206K50G	B72520T0500K062	50	65	100	0,6	0,008
CT1210K50G	B72530T0500K062	50	65	200	1,6	0,010
CT1812K50G	B72580T0500K062	50	65	400	4,5	0,015
CT2220K50G	B72540T0500K062	50	65	800	5,6	0,020
CT1206K60G	B72520T0600K062	60	85	100	0,7	0,008
CT1210K60G	B72530T0600K062	60	85	200	2,0	0,010
CT1812K60G	B72580T0600K062	60	85	400	5,8	0,015
CT2220K60G	B72540T0600K062	60	85	800	6,8	0,020

A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).



Characteristics (T_A = 25 °C)

Type	V_v (1 mA)	ΔV_v (1 mA)	Max. clamping voltage v	i	C_{typ} (1 kHz)	L_{typ}	Derating curve	*V/I* characteristic
SIOV-	V	%	V	A	pF	nH	Page	Page
CT1206K50G	82	± 10	135	1,0	120	1,8	238	268
CT1210K50G	82	± 10	135	2,5	250	1,8	240	269
CT1812K50G	82	± 10	135	5,0	500	2,5	242	270
CT2220K50G	82	± 10	135	10,0	1000	3,0	244	271
CT1206K60G	100	± 10	165	1,0	100	1,8	238	268
CT1210K60G	100	± 10	165	2,5	200	1,8	240	269
CT1812K60G	100	± 10	165	5,0	400	2,5	242	270
CT2220K60G	100	± 10	165	10,0	800	3,0	244	271

A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).

Maximum ratings (0402 … 0603: T_A = 85 °C; 0805 … 2220: T_A = 125 °C)

Type	Ordering code	V_{RMS}	V_{DC}	i_{max} 8/20 µs	W_{max} (2 ms)	P_{max}
SIOV-		V	V	A	J	W
CN0603M4G	B72500V0040M060	4	5,5	30	0,1	0,003
CN0805M4G	B72510V0040M062	4	5,5	100	0,1	0,005
CN1206M4G	B72520V0040M062	4	5,5	150	0,3	0,008
CN1210M4G	B72530V0040M062	4	5,5	250	0,4	0,010
CN1812M4G	B72580V0040M062	4	5,5	500	0,8	0,015
CN2220M4G	B72540V0040M062	4	5,5	1000	1,4	0,020
CN0603M6G	B72500V0060M060	6	8	30	0,1	0,003
CN0805M6G	B72510V0060M062	6	8	120	0,2	0,005
CN0805M6CCG	B72510V5060M062	6	8	120	0,2	0,005
CN1206M6G	B72520V0060M062	6	8	200	0,4	0,008
CN1210M6G	B72530V0060M062	6	8	300	0,7	0,010
CN1812M6G	B72580V0060M062	6	8	500	1,0	0,015
CN2220M6G	B72540V0060M062	6	8	1200	3,6	0,020
CN0603M7G	B72500V0070M060	7	9	30	0,1	0,003
CN0603L8G	B72500V0080L060	8	11	30	0,1	0,003
CN0805L8G	B72510V0080L062	8	11	120	0,2	0,005
CN1206L8G	B72520V0080L062	8	11	200	0,5	0,008
CN1210L8G	B72530V0080L062	8	11	400	1,0	0,010
CN1812L8G	B72580V0080L062	8	11	800	1,8	0,015
CN2220L8G	B72540V0080L062	8	11	1200	4,2	0,020
CN0603K11G	B72500V0110K060	11	14	30	0,2	0,003
CN0805K11G	B72510V0110K062	11	14	120	0,2	0,005
CN1206K11G	B72520V0110K062	11	14	200	0,5	0,008
CN1210K11G	B72530V0110K062	11	14	400	1,2	0,010
CN1812K11G	B72580V0110K062	11	14	800	1,9	0,015
CN2220K11G	B72540V0110K062	11	14	1200	5,4	0,020
CN0402L14GK2	B72592V0140L060	14	16	10	0,01	0,003
CN0603K14G	B72500V0140K060	14	18	30	0,2	0,003
CN0805K14G	B72510V0140K062	14	18	120	0,3	0,005
CN1206K14G	B72520V0140K062	14	18	200	0,5	0,008
CN1210K14G	B72530V0140K062	14	18	400	1,5	0,010
CN1812K14G	B72580V0140K062	14	18	800	2,3	0,015
CN2220K14G	B72540V0140K062	14	18	1200	5,8	0,020

A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).



Characteristics (T_A = 25 °C)

Type	V_v (1 mA)	ΔV_v (1 mA)	Max. clamping voltage v	i	C_{typ} (1 kHz)	L_{typ}	Derating curve	*V/I* characteristic
SIOV-	V	%	V	A	pF	nH	Page	Page
CN0603M4G	8	± 20	19	1,0	200	1,0	238	266
CN0805M4G	8	± 20	19	1,0	700	1,5	238	267
CN1206M4G	8	± 20	17	1,0	1500	1,8	240	268
CN1210M4G	8	± 20	17	2,5	5000	1,8	241	269
CN1812M4G	8	± 20	17	5,0	10000	2,5	242	270
CN2220M4G	8	± 20	17	10,0	24000	3,0	245	271
CN0603M6G	11	± 20	27	1,0	200	1,0	238	266
CN0805M6G	11	± 20	27	1,0	600	1,5	239	267
CN0805M6CCG	11	± 20	27	1,0	1500[1)]	1,5	239	267
CN1206M6G	11	± 20	25	1,0	1200	1,8	240	268
CN1210M6G	11	± 20	25	2,5	4000	1,8	241	269
CN1812M6G	11	± 20	25	5,0	8000	2,5	242	270
CN2220M6G	11	± 20	25	10,0	20000	3,0	245	271
CN0603M7G	12,5	± 20	30	1,0	200	1,0	238	266
CN0603L8G	15	± 15	33	1,0	150	1,0	238	266
CN0805L8G	15	± 15	33	1,0	500	1,5	239	267
CN1206L8G	15	± 15	30	1,0	1000	1,8	240	268
CN1210L8G	15	± 15	30	2,5	3000	1,8	242	269
CN1812L8G	15	± 15	30	5,0	6000	2,5	244	270
CN2220L8G	15	± 15	30	10,0	16000	3,0	245	271
CN0603K11G	18	± 10	35	1,0	100	1,0	238	266
CN0805K11G	18	± 10	35	1,0	400	1,5	239	267
CN1206K11G	18	± 10	33	1,0	800	1,8	240	268
CN1210K11G	18	± 10	33	2,5	2400	1,8	242	269
CN1812K11G	18	± 10	33	5,0	5000	2,5	244	270
CN2220K11G	18	± 10	33	10,0	12000	3,0	245	271
CN0402L14GK2	23,5	± 15	46	1,0	60[2)]	0,8	237	265
CN0603K14G	22	± 10	40	1,0	100	1,0	238	266
CN0805K14G	22	± 10	40	1,0	350	1,5	239	267
CN1206K14G	22	± 10	38	1,0	700	1,8	240	268
CN1210K14G	22	± 10	38	2,5	2000	1,8	242	269
CN1812K14G	22	± 10	38	5,0	4500	2,5	244	270
CN2220K14G	22	± 10	38	10,0	10000	3,0	245	271

1) $\overline{C}$ (1 MHz); ± 20%; 2) C_{typ} (1 MHz)

A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).

Maximum ratings (0402 … 0603: T_A = 85 °C; 0805 … 2220: T_A = 125 °C)

Type	Ordering code	V_{RMS}	V_{DC}	i_{max} 8/20 µs	W_{max} (2 ms)	P_{max}
SIOV-		V	V	A	J	W
CN0603K17G	B72500V0170K060	17	22	30	0,2	0,003
CN0603K17LCG	B72500V2170K060	17	22	10	0,1	0,001
CN0805K17G	B72510V0170K062	17	22	120	0,3	0,005
CN0805K17LCG	B72510V2170K062	17	22	30	0,1	0,004
CN1206K17G	B72520V0170K062	17	22	200	0,6	0,008
CN1210K17G	B72530V0170K062	17	22	400	1,7	0,010
CN1812K17G	B72580V0170K062	17	22	800	2,7	0,015
CN2220K17G	B72540V0170K062	17	22	1200	7,2	0,020
CN0603K20G	B72500V0200K060	20	26	30	0,3	0,003
CN0805K20G	B72510V0200K062	20	26	80	0,3	0,005
CN1206K20G	B72520V0200K062	20	26	200	0,7	0,008
CN1210K20G	B72530V0200K062	20	26	400	1,9	0,010
CN1812K20G	B72580V0200K062	20	26	800	3,0	0,015
CN2220K20G	B72540V0200K062	20	26	1200	7,8	0,020
CN0603K25G	B72500V0250K060	25	31	30	0,3	0,003
CN0805K25G	B72510V0250K062	25	31	80	0,3	0,005
CN1206K25G	B72520V0250K062	25	31	200	1,0	0,008
CN1210K25G	B72530V0250K062	25	31	300	1,7	0,010
CN1812K25G	B72580V0250K062	25	31	800	3,7	0,015
CN2220K25G	B72540V0250K062	25	31	1200	9,6	0,020
CN0805K30G	B72510V0300K062	30	38	80	0,3	0,005
CN1206K30G	B72520V0300K062	30	38	200	1,1	0,008
CN1210K30G	B72530V0300K062	30	38	300	2,0	0,010
CN1812K30G	B72580V0300K062	30	38	800	4,2	0,015
CN2220K30G	B72540V0300K062	30	38	1200	12,0	0,020
CN1206K35G	B72520V0350K062	35	45	100	0,4	0,008
CN1210K35G	B72530V0350K062	35	45	250	2,0	0,010
CN1812K35G	B72580V0350K062	35	45	500	4,0	0,015
CN2220K35G	B72540V0350K062	35	45	1000	7,7	0,020
CN1206K40G	B72520V0400K062	40	56	100	0,5	0,008
CN1210K40G	B72530V0400K062	40	56	250	2,3	0,010
CN1812K40G	B72580V0400K062	40	56	500	4,8	0,015
CN2220K40G	B72540V0400K062	40	56	1000	9,0	0,020

A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).



Characteristics (T_A = 25 °C)

Type	V_v (1 mA)	ΔV_v (1 mA)	Max. clamping voltage v	i	C_{typ} (1 kHz)	L_{typ}	Derating curve	*V/I* characteristic
SIOV-	V	%	V	A	pF	nH	Page	Page
CN0603K17G	27	± 10	46	1,0	100	1,0	238	266
CN0603K17LCG	27	± 10	50	1,0	< 50	1,0	237	266
CN0805K17G	27	± 10	46	1,0	400	1,5	239	267
CN0805K17LCG	27	+22/–8[1]	50	1,0	< 100	1,0	238	267
CN1206K17G	27	± 10	44	1,0	650	1,8	240	268
CN1210K17G	27	± 10	44	2,5	1800	1,8	242	269
CN1812K17G	27	± 10	44	5,0	4000	2,5	244	270
CN2220K17G	27	± 10	44	10,0	9000	3,0	245	271
CN0603K20G	33	± 10	56	1,0	90	1,0	238	266
CN0805K20G	33	± 10	56	1,0	300	1,5	239	267
CN1206K20G	33	± 10	54	1,0	600	1,8	240	268
CN1210K20G	33	± 10	54	2,5	1500	1,8	242	269
CN1812K20G	33	± 10	54	5,0	3000	2,5	244	270
CN2220K20G	33	± 10	54	10,0	7000	3,0	245	271
CN0603K25G	39	± 10	67	1,0	90[2]	1,0	238	266
CN0805K25G	39	± 10	67	1,0	250	1,5	239	267
CN1206K25G	39	± 10	65	1,0	550	1,8	240	268
CN1210K25G	39	± 10	65	2,5	1200	1,8	241	269
CN1812K25G	39	± 10	65	5,0	2500	2,5	244	270
CN2220K25G	39	± 10	65	10,0	5000	3,0	245	271
CN0805K30G	47	± 10	77	1,0	200	1,0	239	267
CN1206K30G	47	± 10	77	1,0	500	1,8	240	268
CN1210K30G	47	± 10	77	2,5	1000	1,8	241	269
CN1812K30G	47	± 10	77	5,0	2000	2,5	244	270
CN2220K30G	47	± 10	77	10,0	4000	3,0	245	271
CN1206K35G	56	± 10	90	1,0	200	1,8	238	268
CN1210K35G	56	± 10	90	2,5	600	1,8	241	269
CN1812K35G	56	± 10	90	5,0	1200	2,5	242	270
CN2220K35G	56	± 10	90	10,0	2500	3,0	245	271
CN1206K40G	68	± 10	110	1,0	250	1,8	238	268
CN1210K40G	68	± 10	110	2,5	500	1,8	241	269
CN1812K40G	68	± 10	110	5,0	1000	2,5	242	270
CN2220K40G	68	± 10	110	10,0	2000	3,0	245	271

1) Tolerance differs from standard; 2) C_{typ} (1 MHz)

A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).



SMD Varistors

Standard – Silver Palladium Termination (0402: Silver Platinum)

Maximum ratings (0402 … 0603: T_A = 85 °C; 0805 … 2220: T_A = 125 °C)

Type	Ordering code	V_{RMS}	V_{DC}	i_{max} 8/20 µs	W_{max} (2 ms)	P_{max}
SIOV-		V	V	A	J	W
CN1206K50G	B72520V0500K062	50	65	100	0,6	0,008
CN1210K50G	B72530V0500K062	50	65	200	1,6	0,010
CN1812K50G	B72580V0500K062	50	65	400	4,5	0,015
CN2220K50G	B72540V0500K062	50	65	800	5,6	0,020
CN1206K60G	B72520V0600K062	60	85	100	0,7	0,008
CN1210K60G	B72530V0600K062	60	85	200	2,0	0,010
CN1812K60G	B72580V0600K062	60	85	400	5,8	0,015
CN2220K60G	B72540V0600K062	60	85	800	6,8	0,020

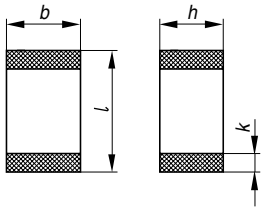
A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).



Characteristics (T_A = 25 °C)

Type	V_v (1 mA)	ΔV_v (1 mA)	Max. clamping voltage v	i	C_{typ} (1 kHz)	L_{typ}	Derating curve	*V/I* characteristic
SIOV-	V	%	V	A	pF	nH	Page	Page
CN1206K50G	82	± 10	135	1,0	120	1,8	238	268
CN1210K50G	82	± 10	135	2,5	250	1,8	240	269
CN1812K50G	82	± 10	135	5,0	500	2,5	242	270
CN2220K50G	82	± 10	135	10,0	1000	3,0	244	271
CN1206K60G	100	± 10	165	1,0	100	1,8	238	268
CN1210K60G	100	± 10	165	2,5	200	1,8	240	269
CN1812K60G	100	± 10	165	5,0	400	2,5	242	270
CN2220K60G	100	± 10	165	10,0	800	3,0	244	271

A wide range of HC, CC and LC types are available upon request (see 3.3.6, chapter *"Applications"*).



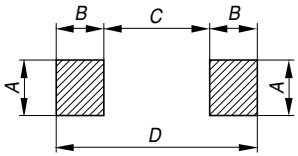
VAR0406-M

Weight: < 0,2 g
Termination acc. CECC 32101-801

Dimensions

Type	*l* mm	*b* mm	*h* mm	*k* mm
SIOV-CT/CN0402	1,0 ± 0,15	0,50 ± 0,10	0,6 max.	0,1 … 0,3
SIOV-CT/CN0603	1,6 ± 0,15	0,80 ± 0,10	0,9 max.	0,1 … 0,4
SIOV-CT/CN0805	2,0 ± 0,20	1,25 ± 0,15	1,4 max.	0,13 … 0,75
SIOV-CT/CN1206	3,2 ± 0,30	1,60 ± 0,20	1,7 max.	0,25 … 0,75
SIOV-CT/CN1210	3,2 ± 0,30	2,50 ± 0,25	1,7 max.	0,25 … 0,75
SIOV-CT/CN1812	4,5 ± 0,40	3,20 ± 0,30	2,5 max.	0,25 … 1,0
SIOV-CT/CN2220	5,7 ± 0,40	5,00 ± 0,40	2,5 max.	0,25 … 1,0

Termination: nickel barrier (CT) or silver palladium (CN)



VAR0391-D

Recommended solder pad layout

Type	*A* mm	*B* mm	*C* mm	*D* mm
SIOV-CT/CN0402	0,6	0,6	0,5	1,7
SIOV-CT/CN0603	1,0	1,0	1,0	3,0
SIOV-CT/CN0805	1,4	1,2	1,0	3,4
SIOV-CT/CN1206	1,8	1,2	2,1	4,5
SIOV-CT/CN1210	2,8	1,2	2,1	4,5
SIOV-CT/CN1812	3,6	1,5	3,0	6,0
SIOV-CT/CN2220	5,5	1,5	4,2	7,2

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