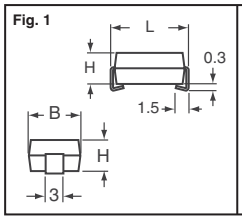
EPCOS

SMD Varistors

RoHS COMPLIANT



Specifications:

CU Series:

• Monolithic varistor element, encapsulated • Encapsulation: Thermoplast, flame retardant to UL 94V-0 • Termination: Tinned copper alloy • Operating Temperature Range: -40°C ~ 85°C • Storage Temperature Range: -40°C ~ 125°C • Electric Strength: ≥2.5kVAC$_{RMS}$ • Insulation Resistance: ≥1.0GΩ • Response Time: <10ns • Solderability: 235°C, 2s • Resistance to soldering heat: 260°C, 10s

CT/CN Series:

• Multilayer Technology • Termination: Nickel barrier (CT Series) and Silver palladium (CN Series) • No plastic or epoxy encapsulation assures better than UL 94V-0 flammability rating • Operating Temperature Range: -55°C ~ 85°C • Storage Temperature Range: -55°C ~ 125°C • Response Time: <0.5ns • Solderability: 235°C, 2s • Resistance to soldering heat: 260°C, 10s

Automotive Series:

• Multilayer Technology • Termination: Silver palladium • No plastic or epoxy encapsulation assures better than UL 94V-0 flammability rating • Operating Temperature Range: -55°C ~ 125°C • Storage Temperature Range: -55°C ~ 150°C • Response Time: <0.5ns • Solderability: 235°C, 2s • Resistance to soldering heat: 260°C, 10s

Features:

CU Series:

• Electrical equivalents to leaded types S05/S07 up to 460 VAC$_{RMS}$ • Good Solderability • Approvals: UL (all types) and CSA (≥K130)

CT/CN Series:

• Good Solderability • Suitable for ESD protection • Bidirectional clamping

Automotive Series:

• High energy absorption, particularly in case of load dump • Stable protection level, low leakage current • High resistance to cyclic temperature stress • Wide operating temperature range • Low inductance (suitable for ESD protection) • Bidirectional clamping

Max. Allowance Voltage (V) AC	DC	Varistor Voltage @ 1mA (V)	Tol. %	Max. Clamping Voltage V	A	i_{max} 8/20 µs A	Dimensions (mm) L	B	H	K	Digi-Key Part No.	Cut Tape Price Each 1	10	100	Digi-Key Part No.	Tape and Reel Qty.	Pricing	Epcos Part No.
Fig. 1 — Monolithic CU Series																		
60	85	100	±10	165	5.0	400	8.0	6.3	3.2	—	495-2607-1-ND	1.04	.97	.75	495-2607-2-ND	1,000	415.00	CU3225K60G2
150	200	240	±10	395	5.0	400	8.0	6.3	3.2	—	495-1463-1-ND	1.05	.98	.75	495-1463-2-ND	1,000	419.00	CU3225K150G2K1
250	320	390	±10	650	5.0	400	8.0	6.3	4.5	—	495-2606-1-ND	1.04	.97	.75	495-2606-2-ND	1,000	415.00	CU3225K250G2
275	350	430	±10	710	5.0	400	8.0	6.3	4.5	—	495-1464-1-ND	1.05	.98	.75	495-1464-2-ND	1,000	419.00	CU3225K275G2K1
300	385	470	±10	775	5.0	400	8.0	6.3	4.5	—	495-1465-1-ND	1.05	.98	.75	495-1465-2-ND	1,000	419.00	CU3225K300G2K1
150	200	240	±10	395	10	1200	10.2	8.0	3.2	—	495-1466-1-ND	1.32	1.23	.95	495-1466-2-ND	1,000	527.80	CU4032K150G2K1
275	350	430	±10	710	10	1200	10.2	8.0	4.5	—	495-1467-1-ND	1.32	1.23	.95	495-1467-2-ND	1,000	527.80	CU4032K275G2K1
300	385	470	±10	775	10	1200	10.2	8.0	4.5	—	495-1468-1-ND	1.32	1.23	.95	495-1468-2-ND	1,000	527.80	CU4032K300G2K1
Fig. 2 — Multilayer CN/CT Series																		
4	5.5	8	±20	24	1.0	25	1.0	.50	.6	.1~.3	495-3425-1-ND	.24	.19	.12	495-3425-2-ND	10,000	64.00/M	CT0402M4G
11	14	16.5	—	35	1.0	10	1.0	.50	.6	.1~.3	495-3424-1-ND	.25	.20	.13	495-3424-2-ND	10,000	67.00/M	CT0402S11AG
14	16	23.5	±15	46	1.0	10	1.0	.50	.6	.1~.3	495-2592-1-ND	.16	.15	.12	495-2592-2-ND	10,000	61.00/M	CT0402L14G
14	16	23	—	66	1.0	2	1.0	.50	.6	.1~.3	495-3426-1-ND	.25	.20	.13	495-3426-2-ND	10,000	67.00/M	CT0402S14AHSG
4	5.5	8	±20	19	1.0	30	1.6	.80	.9	.1~.4	495-2595-1-ND	.22	.21	.16	495-2595-2-ND	4,000	87.00/M	CT0603M4G
14	18	22	±10	40	1.0	30	1.6	.80	.9	.1~.4	495-2593-1-ND	.21	.20	.15	495-2593-2-ND	4,000	84.00/M	CT0603K14G
25	31	39	±10	67	1.0	30	1.6	.80	.9	.1~.4	495-2594-1-ND	.21	.20	.15	495-2594-2-ND	4,000	84.00/M	CT0603K25G
4	5.5	8	±20	19	1.0	100	2.0	1.25	1.4	.13~.75	495-2599-1-ND	.35	.33	.25	495-2599-2-ND	3,000	138.00/M	CT0805M4G
11	14	18	±10	35	1.0	120	2.0	1.25	1.4	.13~.75	495-2596-1-ND	.46	.43	.33	495-2596-2-ND	3,000	182.00/M	CT0805K11G
25	31	39	±10	67	1.0	80	2.0	1.25	1.4	.13~.75	495-2597-1-ND	.35	.33	.25	495-2597-2-ND	3,000	138.00/M	CT0805K25G
30	38	47	±10	77	1.0	80	2.0	1.25	1.4	.13~.75	495-2598-1-ND	.35	.33	.25	495-2598-2-ND	3,000	138.00/M	CT0805K30G
17	22	27	±10	44	1.0	200	3.2	1.60	1.7	.25~.75	495-2601-1-ND	.48	.45	.35	495-2601-2-ND	3,000	191.00/M	CT1206K17G
25	31	39	±10	65	1.0	200	3.2	1.60	1.7	.25~.75	495-2591-1-ND	.50	.47	.36	495-2591-2-ND	2,000	200.00/M	CN1206K25G
30	38	47	±10	77	1.0	200	3.2	1.60	1.7	.25~.75	495-2602-1-ND	.48	.45	.35	495-2602-2-ND	2,000	191.00/M	CT1206K30G
40	56	68	±10	110	1.0	100	3.2	1.60	1.7	.25~.75	495-2603-1-ND	.48	.45	.35	495-2603-2-ND	2,000	191.00/M	CT1206K40G
30	38	47	±10	77	2.5	300	3.2	2.50	1.7	.25~.75	495-2396-1-ND	.81	.70	.59	495-2396-2-ND	2,000	326.00/M	CN1210K30G
30	38	47	±10	77	2.5	300	3.2	2.50	1.7	.25~.75	495-2604-1-ND	.55	.51	.39	495-2604-2-ND	2,000	218.00/M	CT1210K30G
30	38	47	±10	77	10	1200	5.7	5.00	2.5	.25~1.0	495-2397-1-ND	2.04	1.76	1.46	495-2397-2-ND	1,000	817.00	CN2220K30G
Fig. 2 — Multilayer Automotive Series																		
14	16	22	+23/-0	42	1.0	120	2.0	1.25	1.4	.13~.75	495-2600-1-ND	.36	.34	.26	495-2600-2-ND	3,000	144.00/M	CT0805S14BAUTOG
14	16	22	+23/-0	40	1.0	200	3.2	1.60	1.7	.25~.75	495-1459-1-ND	.50	.47	.36	495-1459-2-ND	3,000	200.20/M	CN1206S14BAUTOG
14	16	22	+23/-0	40	2.5	400	3.2	2.50	1.7	.25~.75	495-2605-1-ND	.55	.51	.39	495-2605-2-ND	3,000	218.00/M	CT1210S14BAUTOG
14	16	22	+23/-0	40	2.5	400	3.2	2.50	1.7	.25~.75	495-1460-1-ND	.55	.51	.39	495-1460-2-ND	3,000	218.40/M	CN1210S14BAUTOG
14	16	22	+23/-0	40	10	1200	5.7	5.00	2.5	.25~1.0	495-1461-1-ND	2.18	2.03	1.56	495-1461-2-ND	1,500	871.78/M	CN2220S14BAUTOG

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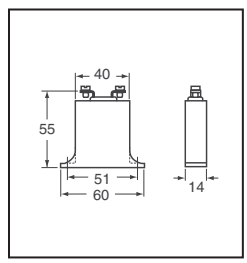
Block Varistors - HighE Series

Specifications: • Disk-shaped varistor element, potted in plastic housing • Housing and potting flame-retardant to UL 94 V-0 • Screw terminals M4 • Operating Temperature Range: -40°C ~ 85°C • Storage Temperature Range: -40°C ~ 110°C • Electric Strength: ≥2.5 kV$_{RMS}$ • Insulation Resistance: ≥10MΩ • Response Time: <25ns **Features:** • Heavy-duty varistors (surge current capability up to 100kA) • Wide product range • Approvals: UL, CSA (≥K130), SEV

RoHS COMPLIANT



Max. Allowance Voltage (V) AC	DC	Varistor Voltage @ 1mA ±10% (V)	Max. Clamping Voltage V	A	i_{max} 8/20 µs A	Digi-Key Part No.	Pricing 1	10	100	1,000	5,000	Epcos Part No.
130	170	205	340	200	25000	495-1452-ND	30.27	259.42	2161.83	12322.40	11500.91/M	B32K130
150	200	240	395	200	25000	495-1453-ND	30.27	259.42	2161.83	12322.40	11500.91/M	B32K150
275	350	430	710	200	25000	495-2393-ND	19.02	151.33	1232.24	10809.13	—	B32K275
550	745	910	1500	200	25000	495-2394-ND	22.86	181.85	1480.80	12989.50	—	B32K550
130	170	205	340	300	40000	495-1454-ND	47.80	409.73	3414.38	19461.94	18164.48/M	B40K130
150	200	240	395	300	40000	495-1455-ND	47.80	409.73	3414.38	19461.94	18164.48/M	B40K150
275	350	430	710	300	40000	495-2395-ND	30.05	239.01	1946.19	17071.88	—	B40K275

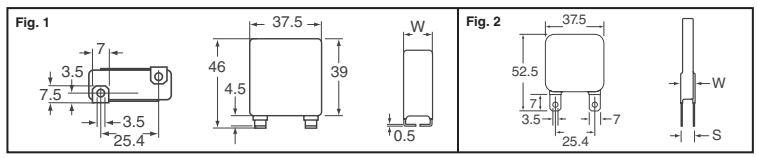
Strap Varistors – HighE Series

Specifications:

• Coating: Epoxy resin, flame-retardant to UL 94V-0 • Bolt-holed strap terminals for screw fixing or soldering • Bent strap terminals • Operating Temperature Range: -25°C ~ 85°C • Storage Temperature Range: -25°C ~ 110°C • Electric Strength: ≥2.5 kVAC$_{RMS}$ • Insulation Resistance: ≥10MΩ • Response Time: <25ns

Features:

• Maximum load capacity with minimum size • Approvals: UL, CSA



Max. Allowable Voltage (V) AC	DC	Varistor Voltage @ 1mA ±10% (V)	Max. Clamping Voltage V	A	$i_{max.}$ 8/20 µs A	Dimensions (mm) W	S	Digi-Key Part No.	Pricing 1	10	100	1,000	5,000	Epcos Part No.
Fig. 1														
150	200	240	395	300	40,000	8.3	—	495-1456-ND	40.07	343.47	2862.28	16314.97	15227.31/M	LS40K150QP
275	350	430	710	300	40,000	9.4	—	495-1457-ND◆	40.07	343.47	2862.28	16314.97	15227.31/M	LS40K275QP
320	420	510	840	300	40,000	9.9	—	495-1458-ND◆	40.07	343.47	2862.28	16314.97	15227.31/M	LS40K320QP
150	200	240	395	300	45,000	8.3	—	495-3439-ND◆	35.83	250.82	2149.88	19348.88	17915.63/M	LS41K150QP
275	350	430	710	300	45,000	9.4	—	495-3440-ND◆	35.83	250.82	2149.88	19348.88	17915.63/M	LS41K275QP
320	420	510	840	300	45,000	9.9	—	495-3441-ND◆	35.83	250.82	2149.88	19348.88	17915.63/M	LS41K320QP
420	560	680	1120	300	45,000	10.9	—	495-3442-ND◆	39.52	276.62	2371.01	21339.05	19758.38/M	LS41K420QP
275	350	430	710	300	65,000	9.4	—	495-3443-ND◆	60.20	421.38	3611.79	32506.11	30098.25/M	LS42K275QP
320	420	510	840	300	65,000	9.9	—	495-3445-ND◆	60.20	421.38	3611.79	32506.11	30098.25/M	LS42K320QP
420	560	680	1120	300	65,000	10.9	—	495-3447-ND◆	66.54	465.81	3992.63	35933.63	33271.88/M	LS42K420QP
Fig. 2 — RoHS Compliant														
275	350	430	710	300	65,000	9.4	5.8	495-3444-ND	60.20	421.38	3611.79	32506.11	30098.25/M	LS42K275QPK2
320	420	510	840	300	65,000	9.9	6.3	495-3446-ND	60.20	421.38	3611.79	32506.11	30098.25/M	LS42K320QPK2
420	560	680	1120	300	65,000	10.9	7.3	495-3448-ND	66.54	465.81	3992.63	35933.63	33271.88/M	LS42K420QPK2

◆ *RoHS Compliant*