Description:

Almost all electronic systems in internal-combustion powered vehicles, e.g., anti-lock brakes, direct ignition, airbag control, wiper motors, etc. are susceptible to damage from destructive voltage transients.

Stackpole/KEKO's AV Series of leaded automotive varistors includes both multilayer and single layer components, defined by W_{LD} capability. Multilayer devices are intended W_{LD} applications requiring up to 50 Joules of energy, and single layer discs are for W_{LD} applications requiring above 50 Joules of energy.

Automotive multilayer varistors offer excellent transient energy absorption due to improved internal energy distribution. Compared to an equivalent automotive disc varistor, they offer better electrical characteristic in much smaller size. Automotive disc varistors are specifically designed and used in applications requiring higher levels of W_{LD} energy absorption, which MLV devices are incapable of handling.

Features:

- AC operating voltage range (Vrms) from 14V to 35V
- DC operating voltage (Vdc) from 16V to 42V
- Power supply voltages (Vdc) 12V, 24V and 42V
- Broad range of current and energy handling capabilities realized with either type of construction
- In-line leads on automotive MLV varistors
- MLV varistors: +125ºC continuous operating temperature (+150ºC for AVY)
- W_{LD} up to 50J
- AVY high temperature product will have performance characteristics different from the AV listed here. Contact factory for specific details.

General Technical Data		
Specification	MLV	SLV
Operating Ambient Temperature for W_{LD} above 50J - AV	-40ºC to +150ºC	-40ºC to +85ºC
Operating Ambient Temperature for W_{LD} above 50J - AVY	-40ºC to +150ºC	-40ºC to +150ºC
Storage Temperature Range for W_{LD} above 50J	-40ºC to +85ºC	-40ºC to +125ºC
Threshold Voltage Temperature Coefficient	≤0.05% / ºC	
Insulation Resistance	> 1Gohm	
Response Time	< 25ns	
Climatic Category for W_{LD} ≤ 50J - MLV	40/125/56	40/85/56

How to Order

SEI Type	Lead Style	Vrms	Tolerance	Disc Size	Lead Spacing	W_{LD}	Packaging
AV	1	20	K	80	80	201	R1

Type	Description
AV	Standard
AVY	High Temp

Model Size	Version
60 2	1 = Outward crimped
80 2	1 = Straight leads
80 2	5 = Straight with kink
90 2	1 = Inward crimped
110 3	1 = Inward crimped
20, 40	1 = Straight leads

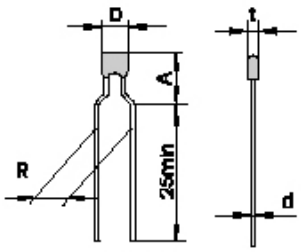
Code	Tolerance
K	10%

Size
60 = 6mm
80 = 8mm
90 = 9mm
110 = 11mm
20 = 20mm
40 = 40mm

Code	Spacing
2	5mm
3	7.5mm

W_{LD}
003 = 3
006 = 6
012 = 12
025 = 25
050 = 50
100 = 100

Code	Description
B	Bulk
R	Reel
A	Ammo



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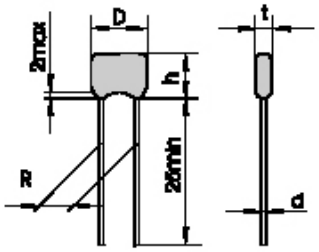

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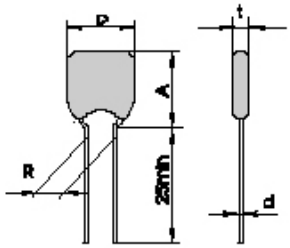

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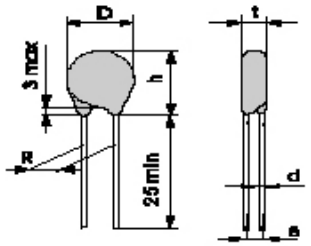

SIZE 20, 40

Standard Packaging Options / Quantities

Series	Voltage Range (Vrms)	Model Size	Packaging Options: 7mm, 10mm, 14mm, 20mm and 23mm B = Bulk; R = Reel; A = Ammo Pack		
			B	R	A
AV, AVY	14 - 40	60 2	1,500	2,000	2,000
	14 - 40	80 2	1,000	1,500	1,500
	14 - 40	90 2	1,000	1,500	1,500
	14 - 20	110 3	700	1,000	1,000
	25 - 40	20	400	700	800
	25 - 40	40	400	700	800

Device Ratings and Dimensions

Part Number	V_{RMS} (volts)	V_{DC} (volts)	V_N (volts)	V_{JUMP} (volts)	V_C (volts)	I_C (amps)	I_P (amps)	W_{MAX} (joules)	W_{LD} (joules)	P_{MAX} (watts)	C_{TYP} (pF)	D_{MAX} (mm)	t_{MAX} (mm)	h_{MAX} (mm)	R (mm)	d (mm)
12V Power Supply																
AV 14 K 602 003	14	16	24	24.5	40	2.5	400	1.6	3	0.010	2.5	7	4.5	7	5	0.6
AV 14 K 802 006	14	16	24	24.5	40	5.0	800	2.4	6	0.015	4.6	8	4.5	9	5	0.6
AV 14 K 902 012	14	16	24	24.5	40	5.0	1,200	4.4	12	0.030	10.5	9	4.5	12	5	0.6
AV 14 K 902 025	14	16	24	24.5	40	10.0	2,000	6.0	25	0.080	22.0	9	5.5	12	5	0.6
AV 14 K 1103 050	14	16	24	24.5	40	10.0	2,000	13.2	50	0.100	29.0	11	6.5	12	7.5	0.6
AV 17 K 602 003	17	20	27	30.0	44	2.5	400	1.8	3	0.010	2.0	7	4.5	7	5	0.6
AV 17 K 802 006	17	20	27	30.0	44	5.0	800	2.9	6	0.015	4.0	8	4.5	9	5	0.6
AV 17 K 902 025	17	20	27	30.0	44	10.0	2,000	7.2	25	0.080	18.0	9	5.5	12	5	0.6
AV 17 K 1103 050	17	20	27	30.0	44	10.0	2,000	15.8	50	0.100	24.0	11	6.5	12	7.5	0.6
24V Power Supply																
AV 20 K 602 003	20	26	33	30	54	2.5	400	1.9	3	0.010	1.8	7.0	4.5	7	5	0.6
AV 20 K 802 006	20	26	33	30	54	5.0	800	3.0	6	0.015	3.5	8.0	4.5	9	5	0.6
AV 20 K 902 025	20	26	33	30	54	10.0	2,000	9.0	25	0.080	13.0	9.0	4.5	12	5	0.6
AV 20 K 1103 050	20	26	33	30	54	10.0	2,000	17.0	50	0.100	18.0	11.0	6.5	12	7.5	0.6
AV 25 K 14 050	25	28	39	40	77	20.0	2,000	28.0	50	0.200	14.0	22.5	4.6	24	10	1.0
AV 25 K 20 100	25	28	39	40	77	20.0	2,000	50.0	100	0.300	28.0	22.5	5.6	24	10	1.0
AV 30 K 602 003	30	34	47	50	77	2.5	400	2.3	3	0.010	1.3	7.0	4.5	7	5	0.6
AV 30 K 802 006	30	34	47	50	77	5.0	800	3.8	6	0.015	2.0	8.0	4.5	9	5	0.6
AV 30 K 902 025	30	34	47	50	77	10.0	2,000	18.0	25	0.080	12.0	9.0	4.5	12	5	0.6
AV 30 K 14 050	30	34	47	50	93	20.0	2,000	34.0	50	0.200	13.5	22.5	4.6	24	10	1.0
AV 30 K 20 100	30	34	47	50	93	20.0	2,000	60.0	100	0.300	26.0	22.5	5.6	24	10	1.0
42V Power Supply																
AV 40 K 602 003	40	56	68	65	110	2.5	400	2.6	3	0.010	1.1	7.0	4.5	7	5	0.6
AV 40 K 802 006	40	56	68	65	110	5.0	800	4.8	6	0.015	1.8	8.0	4.5	9	5	0.6
AV 40 K 902 025	40	56	68	65	110	10.0	2,000	18.0	25	0.080	6.6	9.0	4.5	12	5	0.6
AV 40 K 14 050	40	56	68	65	135	20.0	2,000	37.0	50	0.200	12.5	22.5	4.6	24	10	1.0
AV 40 K 20 100	40	56	68	65	135	20.0	2,000	76.0	100	0.300	24.0	22.5	5.6	24	10	1.0