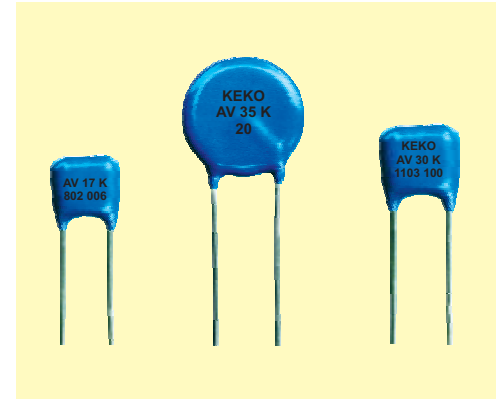


## AUTOMOTIVE VARISTORS AV SERIES

### Description

Almost all electronic systems in an automobile, e.g. anti-block brake system, direct ignition system, airbag control system, wiper motors, etc. are susceptible to damage from destructive voltage transients.

AV Series of leaded automotive varistors includes both multilayer-varistor and single layer disc components upon request. Automotive Varistors are intended for WLD applications typically requiring up to 50J of energy, and disc automotive varistors for WLD applications requiring higher than 50 J of energy.



Automotive varistors offer excellent transient energy absorption due to improved internal energy distribution. Compared to equivalent disc automotive varistors they offer better electrical characteristics realised in much smaller size. Automotive disc varistors are however, specifically designed and used in applications requiring higher levels of WLD energy absorption.

### Features

- Supply voltage .....12 V, 24 V and 42 V.
- Broad range of current and energy handling capabilities realised with either type of construction (leaded multilayer and disc automotive varistors).
- +85 C continuous operating temperature.
- +125 C continuous operating temperature is available upon request.
- In-line leads in case of leaded varistors.
- Available in tape and reel for automatic insertion equipment.
- U11449, C22.2 - File E221545 Section 7.
- Lead free components.
- AEC-Q200 qualified Grade 1.



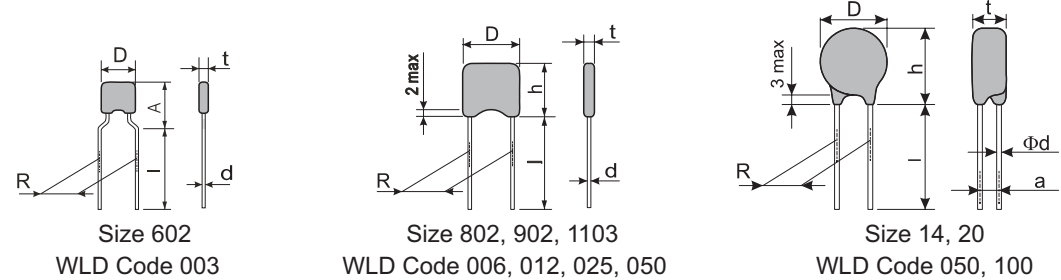
### Absolute Maximum Ratings

	Units	Value
<b>Continuous :</b>		
Steady State Applied Voltage :		
DC Voltage Range ( $V_{dc}$ )	V	18 to 56 *
<b>Transient :</b>		
Load Dump Energy, ( WLD)	J	3 to 25 **
Jump Start Capability (5 minutes), ( $V_{jump}$ )	V	24.5 to 65
Peak Single Pulse Surge Current, 8/20 $\mu$ s Waveform, ( $I_{max}$ )	A	400 to 2000
Single Pulse Surge Energy, 10/1000 $\mu$ s Waveform ( $W_{max}$ )	J	1,6 to 76
<b>Operating Ambient Temperature</b>	$^{\circ}$ C	-40 to +85
<b>Storage Temperature Range</b>	$^{\circ}$ C	-40 to +125
<b>Threshold Voltage Temperature Coefficient</b>	%/ $^{\circ}$ C	< + 0.05
<b>Insulation Resistance</b>	G $\Omega$	> 1
<b>Isolation Voltage Capability</b>	kV	>1.25
<b>Response Time</b>	ns	<25
<b>Climatic Category</b>		40/85/56

\* - Higher operating voltages are available upon request.

\*\* - Automotive varistors with WLD = 50J and 100J in the form of leaded multilayer or single layer disc varistors are available upon request.

**Device Ratings and Characteristics**



**AV 14 K 602 003...AV 40 K 40 100**

Type	V <sub>rms</sub> V	V <sub>dc</sub> V	V <sub>n</sub> @ 1 mA V	V <sub>jump</sub> 5 min V	V <sub>c</sub> V	I <sub>c</sub> A	I <sub>max</sub> 8/20 μs A	W <sub>max</sub> 10/1000 μs J	WLD 10 x J	P max W	C <sub>typ</sub> 1 kHz nF	D max mm	t max mm	R mm	d mm	h/A max mm
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**12 V Power Supply**

AV 14 K 602 003	14	16	24	24,5	40	2,5	400	1,6	3	0,010	2,5	7,0	4,5	5,0	0,6	7
AV 14 K 802 006	14	16	24	24,5	40	5	800	2,4	6	0,015	4,6	8,0	4,5	5,0	0,6	9
AV 14 K 902 012	14	16	24	24,5	40	5	1200	4,4	12	0,030	10,5	9,0	4,5	5,0	0,6	12
AV 14 K 902 025	14	16	24	24,5	40	10	2000	6,0	25	0,080	22,0	9,0	5,5	5,0	0,6	12
AV 14 K 1103 050	14	16	24	24,5	40	10	2000	13,2	50	0,100	29,0	11,0	6,5	7,5	0,6	12
AV 17 K 602 003	17	20	27	30	44	2,5	400	1,8	3	0,010	2,0	7,0	4,5	5,0	0,6	7
AV 17 K 802 006	17	20	27	30	44	5	800	2,9	6	0,015	4,0	8,0	4,5	5,0	0,6	9
AV 17 K 902 025	17	20	27	30	44	10	2000	7,2	25	0,080	18,0	9,0	5,5	5,0	0,6	12
AV 17 K 1103 050	17	20	27	30	44	10	2000	15,8	50	0,100	24,0	11,0	6,5	7,5	0,6	12

**24 V 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	5,0	0,6	7
AV 20 K 802 006	20	26	33	30	54	5	800	3,0	6	0,015	3,5	8,0	4,5	5,0	0,6	9
AV 20 K 902 025	20	26	33	30	54	10	2000	9,0	25	0,080	13,0	9,0	4,5	5,0	0,6	12
AV 20 K 1103 050	20	26	33	30	54	10	2000	17,0	50	0,100	18,0	11,0	6,5	7,5	0,6	12
AV 25 K 14 050	25	28	39	40	77	20	2000	28,0	50	0,200	14,0	22,5	4,6	10,0	1,0	24
AV 25 K 20 100	25	28	39	40	77	20	2000	50,0	100	0,300	28,0	22,5	5,6	10,0	1,0	24
AV 30 K 602 003	30	34	47	50	77	2,5	400	2,3	3	0,010	1,3	7,0	4,5	5,0	0,6	7
AV 30 K 802 006	30	34	47	50	77	5	800	3,8	6	0,015	2,0	8,0	4,5	5,0	0,6	9
AV 30 K 902 025	30	34	47	50	77	10	2000	18,0	25	0,080	12,0	9,0	4,5	5,0	0,6	12
AV 30 K 14 050	30	34	47	50	93	20	2000	34,0	50	0,200	13,5	22,5	4,6	10,0	1,0	24
AV 30 K 20 100	30	34	47	50	93	20	2000	60,0	100	0,300	26,0	22,5	5,6	10,0	1,0	24

**42 V 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	5,0	0,6	7
AV 40 K 802 006	40	56	68	65	110	5	800	4,8	6	0,015	1,8	8,0	4,5	5,0	0,6	9
AV 40 K 902 025	40	56	68	65	110	10	2000	18,0	25	0,080	6,6	9,0	4,5	5,0	0,6	12
AV 40 K 14 050	40	56	68	65	135	20	2000	37,0	50	0,200	12,5	22,5	4,6	10,0	1,0	24
AV 40 K 20 100	40	56	68	65	135	20	2000	76,0	100	0,300	24,0	22,5	5,6	10,0	1,0	24

\* - Types AV 35 are available upon request.

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