



Lightning Surge Protection
Axial Lead Transient Voltage Suppressors
AK3 Series

1. Features

- Axial lead terminals
- High current transient suppressor
- Excellent Clamping Capability
- Glass Passivated Junction
- Bi-directional
- Low Slope Resistance
- Repetition Rate (duty cycle):0.01%
- Hazardous Substances Free
- RoHS Compliant
- High Temperature soldering: 260°C/10 seconds at terminals
- Epoxy Encapsulated
- Silver plated leads

2. Maximum Ratings and Thermal Characteristics(TA=25°C)

Parameter	Symbol	Value	Units
Operating junction	TJ	-55 to +150	°C
Storage Temperature Range	TSTG	-55 to +150	°C
Current Rating ¹	IPP	3	KA

Note:

(1) Rated IPP measured with 8 × 20μs pulse.

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3. Electrical Characteristics (TA=25°C unless otherwise noted)

Part Number	Reverse Stand-off Voltage		Breakdown Voltage	Test Current	Current Rating	Maximum Clamping Voltage	Reverse Leakage
	V _{AC} (V)	V _{DC} (V)	V _{BR} (V) Min.@I _T	I _T (mA)	I _{PP} 8/20 μs(KA)	V _C (V)@ I _{PP}	I _R (μA)@V _{DC}
AK3-012C	8.5	12.80	14	10.0	3.0	28	5
AK3-015C	11	15.00	17	10.0	3.0	30	5
AK3-020C	14	20.00	22	10.0	3.0	40	5
AK3-025C	17	25.00	28	10.0	3.0	50	5
AK3-030C	21	30.00	33	10.0	3.0	60	5
AK3-042C	30	42.00	47	10.0	3.0	77	5
AK3-058C	40	58.00	64	10.0	3.0	110	5
AK3-066C	45	66.00	70	10.0	3.0	125	5
AK3-076C	54	76.00	85	10.0	3.0	140	5
AK3-100C	72	100.00	110	10.0	3.0	165	5
AK3-133C	100	133.00	147	10.0	3.0	220	5
AK3-170C	130	170.00	180	10.0	3.0	260	5
AK3-190C	145	190.00	200	10.0	3.0	290	5
AK3-200C	150	200.00	222	10.0	3.0	330	5
AK3-240C	180	240.00	250	10.0	3.0	340	5
AK3-380C	275	380.00	401	10.0	3.0	520	5
AK3-430C	310	430.00	440	10.0	3.0	625	5

4. Physical Specifications

Weight	Contact manufacturer
Case	Epoxy encapsulated
Terminal	Silver plated leads, solderable per MIL-STD-750, Method 2026

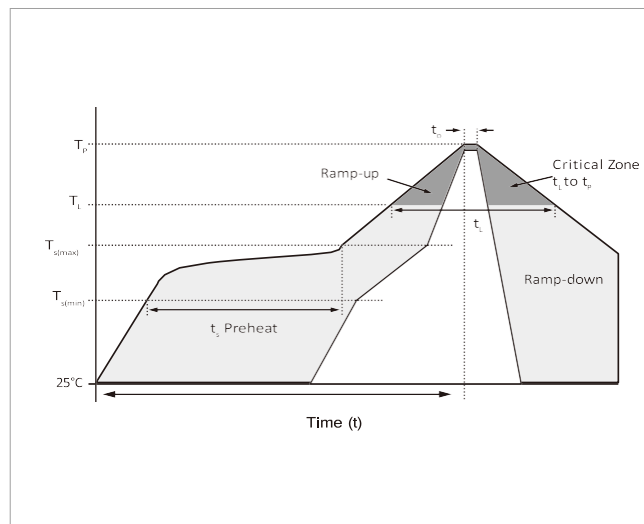
NOTE : Specification subject to change without notice.

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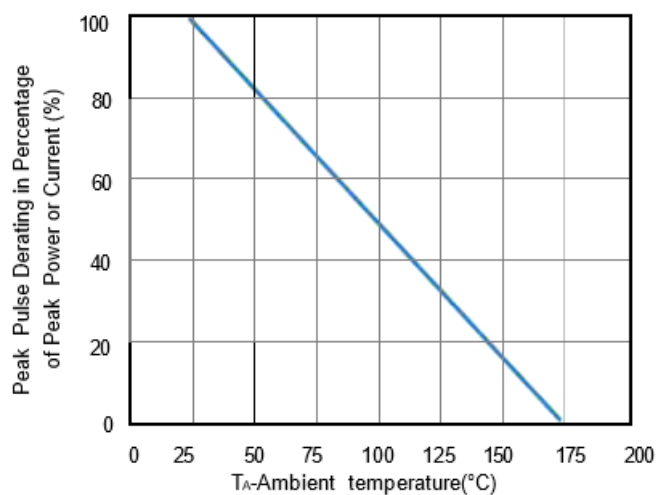


5. Soldering Parameters

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes max.
Do not exceed		280°C



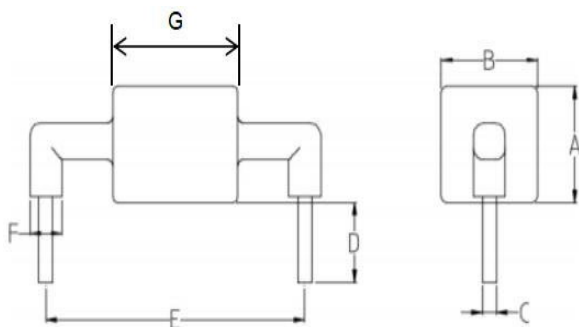
6. Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)



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7. Dimensions



Dimensions		Inches	Millimeters
A		0.37±0.039	9.0±1.0
B		0.37±0.039	9.0±1.0
C		0.051±0.004	1.30±0.1
D		0.236±0.039	6.00±1.0
E		0.95±0.028	24.15±0.7
F		0.138±0.028	3.0±0.7
G	012~025	0.177±0.047	4.5±1.2
	030~042	0.209±0.047	5.3±1.2
	058~076	0.244±0.047	6.2±1.2
	100	0.307±0.047	7.8±1.2
	133	0.339±0.047	8.6±1.2
	170~200	0.370±0.047	9.4±1.2
	240	0.433±0.047	11.0±1.2
	380	0.567±0.047	14.4±1.2
	430	0.598±0.047	15.2±1.2

8. Part Numbering and Marking System

Part Numbering System



Marking System

