

**Reverse Stand-Off Voltage :**  
**58 to 430 V**

## Lightning Surge Protection Axial Lead Transient Voltage Suppressors

### Features

- High current transient suppressors.
- Excellent Clamping Capability.
- Glass Passivated chip
- Bi-directional.
- Low Slope Resistance.
- Hazardous Substances Free.
- RoHS Compliant.
- High Temperature soldering: 260°C/10 seconds at terminals
- Epoxy Encapsulated.
- UL certified

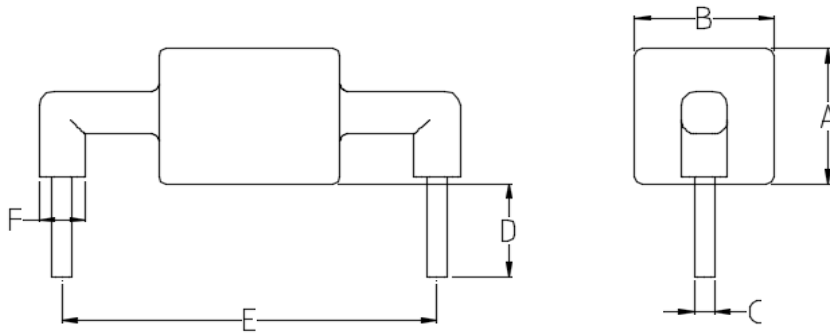


### Maximum Ratings And Thermal Characteristics

Parameter	Symbol	Value		UNIT
Current Rating, Rated IPP measured with 8/20us pulse	I <sub>pp</sub>	K1	1	Kamps
		KA	3	
		KB	6	
		KC	10	
		KD	15	
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150		°C



Dimensions



K1 Series		
Dimensions	Inches	Millimeters
A	max 0.571	max 14.5
B	max 0.500	max 12.7
C	0.051 ± 0.004	1.30 ± 0.10
D	0.276 ± 0.019	7.00 ± 0.50
E	0.95 ± 0.028	24.15 ± 0.7
F	max 0.158	max 4

KA Series		
Dimensions	Inches	Millimeters
A	max 0.571	max 14.5
B	max 0.500	max 12.7
C	0.051 ± 0.004	1.30 ± 0.10
D	0.276 ± 0.019	7.00 ± 0.50
E	0.95 ± 0.028	24.15 ± 0.7
F	max 0.158	max 4

KB Series		
Dimensions	Inches	Millimeters
A	max 0.571	max 14.5
B	max 0.500	max 12.7
C	0.051 ± 0.004	1.30 ± 0.10
D	0.276 ± 0.019	7.00 ± 0.50
E	0.95 ± 0.028	24.15 ± 0.7
F	max 0.158	max 4

KC Series		
Dimensions	Inches	Millimeters
A	max 0.630	max 16
B	max 0.571	max 14.5
C	0.051 ± 0.004	1.30 ± 0.10
D	0.276 ± 0.019	7.00 ± 0.50
E	0.95 ± 0.028	24.15 ± 0.7
F	max 0.158	max 4

KD Series		
Dimensions	Inches	Millimeters
A	max 0.685	max 17.40
B	max 0.626	max 15.90
C	0.051 ± 0.004	1.30 ± 0.10
D	0.276 ± 0.019	7.00 ± 0.50
E	0.95 ± 0.028	24.15 ± 0.7
F	max 0.158	max 4

**Ratings and Characteristics Curves ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)**

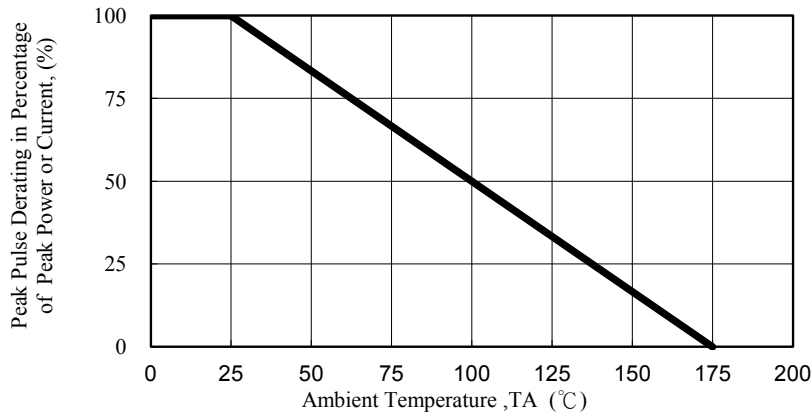


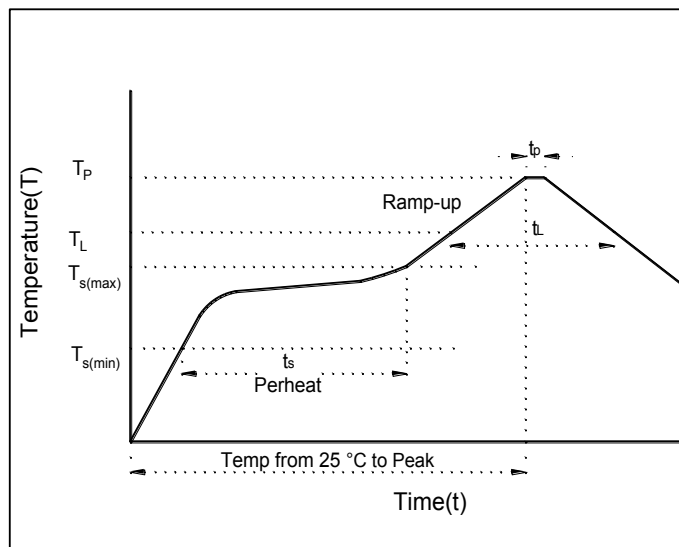
Fig. 1 - Pulse Derating Curve

**Soldering Parameters**

IR-Reflow Condition			
Pre Heat	Temp. min	150	$^{\circ}\text{C}$
	Temp. max	200	$^{\circ}\text{C}$
	Time(min to max)	60-180	sec
Ramp up rate (150-200 $^{\circ}\text{C}$ )	<3	$^{\circ}\text{C}/\text{sec}$	

Reflow	Liquidus Temp.	>220	$^{\circ}\text{C}$
	Peak Temp.	255-260	$^{\circ}\text{C}$
	Time(Liq. to Peak)	60-150	sec
Ramp up rate (220-200 $^{\circ}\text{C}$ )	<3	$^{\circ}\text{C}/\text{sec}$	
Time within actual peak temp.	10-30	sec	

Ramp down Rate	<5	$^{\circ}\text{C}/\text{sec}$
Time(25 $^{\circ}\text{C}$ to Peak temp.)	<6	min
Do not exceed	280	$^{\circ}\text{C}$





**Electrical Characteristics( $T_A=25^{\circ}\text{C}$  unless otherwise noted)**

Part Number	Reverse Stand-Off Voltage		Breakdown Voltage	Test Current	Current Rating	Maximum Clamping Voltage	Reverse Leakage
	VAC(V)	VDC(V)	VBR(V) MIN.@IT	IT(mA)	8/20 $\mu\text{s}$ (KA)	VC(V) @IPP	IR( $\mu\text{A}$ ) @VDC
K1076	54	76	83	10	1	135	20
KA012	8.5	12.8	14	10	3	28	20
KA015	11	15	17	10	3	30	20
KA020	14	20	22	10	3	40	20
KA025	17	25	28	10	3	50	20
KA030	21	30	33	10	3	90	20
KA042	30	42	47	10	3	77	20
KA058	40	58	64	10	3	110	20
KA066	45	66	70	10	3	125	20
KA076	54	76	85	10	3	140	20
KA170	130	170	180	10	3	260	20
KA380	275	380	401	10	3	520	20
KA430	310	430	440	10	3	625	20
KB030	21	30	33	10	6	90	20
KB058	40	58	64	10	6	110	20
KB066	45	66	70	10	6	125	20
KB076	54	76	83	10	6	140	20
KB170	130	170	180	10	6	260	20
KB190	145	190	200	10	6	290	20
KB240	180	240	250	10	6	340	20
KB380	275	380	401	10	6	520	20
KB430	310	430	440	10	6	625	20
KC030	21	30	33	10	10	90	20
KC058	40	58	64	10	10	110	20
KC066	45	66	70	10	10	125	20
KC076	54	76	83	10	10	135	20
KC170	130	170	180	10	10	260	20
KC190	145	190	200	10	10	290	20
KC240	180	240	250	10	10	340	20
KC380	275	380	401	10	10	520	20
KC430	310	430	440	10	10	625	20
KD012	8.5	12.8	14	10	15	50	20
KD042	30	42	47	10	15	100	20
KD058	40	58	64	10	15	110	20
KD076	54	76	85	10	6	150	20

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