

## DESCRIPTION

The AK10 series of high current transient suppressors have been specially designed for use in A.C. line protection and any demanding applications(AC or DC).They offer superior clamping characteristics over standard S.A.D. technologies .Therefore,any voltage rise due to increased current conduction is contained to a minimum,providing the best possible protection level.They can also be connected in series and/or parallel to create very high capacity protection solutions.

## FEATURES

- > Bi-directional
- > Halogen-free
- >RoHS compliant
- >Low slope resistance
- > Very low clamping voltage
- > Sharp breakdown voltage
- > Symmetric in leads width for easier soldering during assembly
- >Glass passivated junction
- > Ultra compact:less than one-tenth the size of traditional discrete solutions
- >IEC-61000-4-2 ESD 15KV(Air),8KV(Contact)



## MAXIMUM RATINGS @ 25°C UNLESS OTHERWISE SPECIFIED

PARAMETER	SYMBOL	VALUE	UNIT
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C
Operating junction Temperature Range	T <sub>J</sub>	-55~125	°C
Current Rating	I <sub>PP</sub>	10	KA

**Notes:**  
1. Rated I<sub>pp</sub> measured with 8/20uS pluse.

## ELECTRICAL CHARACTERISTICS PER LINE@ 25°C UNLESS OTHERWISE SPECIFIED

PART NUMBER	PART Marking	STAND-OFF VOLTAGE (V <sub>SO</sub> ) Volts	MAX REVERSE LEAKAGE (IR)@V <sub>SO</sub> uA	TYPICAL I <sub>R</sub> @85°C uA	BREAKDOWN VOLTAGE @I <sub>T</sub>		TEST CURRENT (mA)	MAXIMUM CLAMPING VOLTAGE @I <sub>PP</sub>		MAX.TEMP COEFFICIENT OF V <sub>BR</sub> (%/°C)	MAX. CAPACITANCE @0BIAS 10KHZ (nF)
					Min(V)	Max(V)		V <sub>C</sub> (V)	I <sub>PP</sub> (A)		
AK10-015C	10-015C	15	10	15	16	19	10	28	10000	0.1	12.0
AK10-030C	10-030C	30	10	15	32	37	10	58	10000	0.1	11.0
AK10-058C	10-058C	58	10	15	64	70	10	110	10000	0.1	6.5
AK10-066C	10-066C	66	10	15	72	80	10	120	10000	0.1	6.5
AK10-076C	10-076C	76	10	15	85	95	10	140	10000	0.1	6.5
AK10-170C	10-170C	170	10	15	180	220	10	260	10000	0.1	2.8
AK10-190C	10-190C	190	10	15	200	245	10	290	10000	0.1	2.5
AK10-240C	10-240C	240	10	15	250	285	10	340	10000	0.1	2.2
AK10-380C	10-380C	380	10	15	401	443	10	520	10000	0.1	2.0
AK10-430C	10-430C	430	10	15	440	490	10	625	10000	0.1	1.4
AK10-530C	10-530C	530	10	15	560	619	10	750	10000	0.1	1.0



**RATINGS AND CHARACTERISTIC CURVES** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

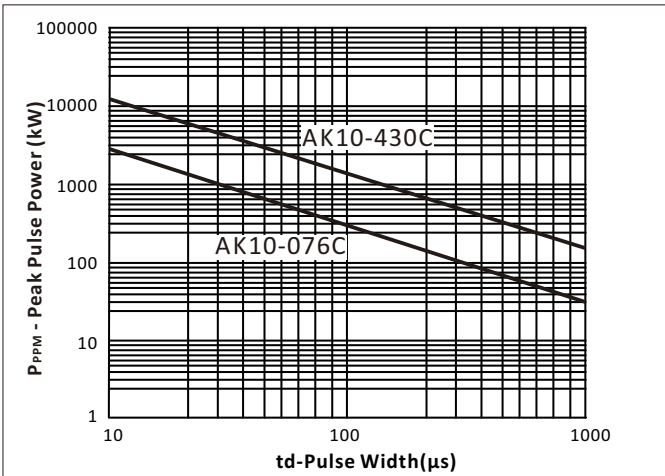


Figure 1. Peak Pulse Power Rating Curve

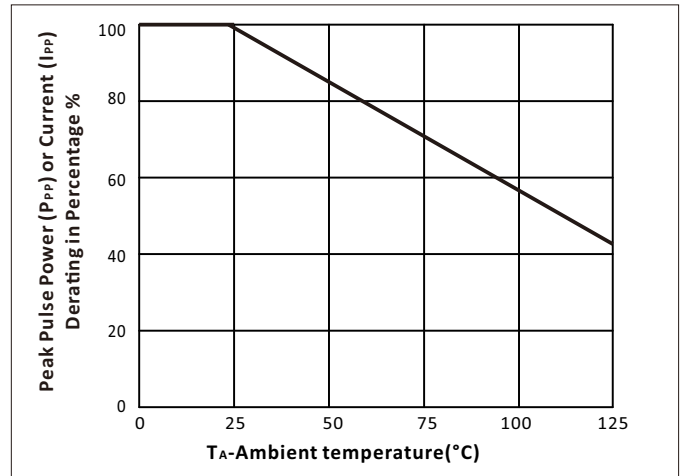


Figure 2. Pulse Derating Curve

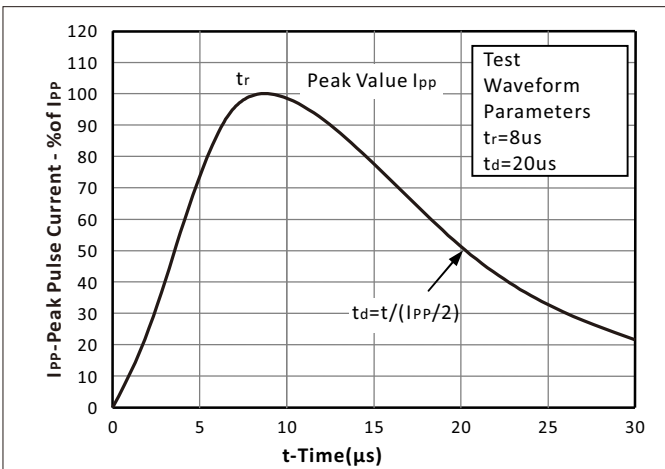


Figure 3. Pulse Waveform

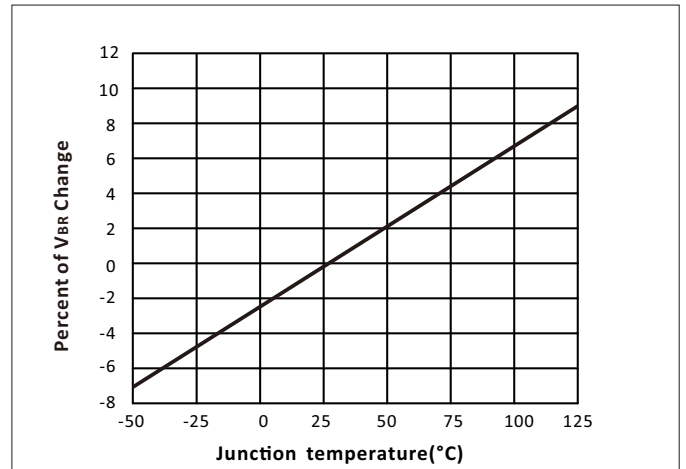
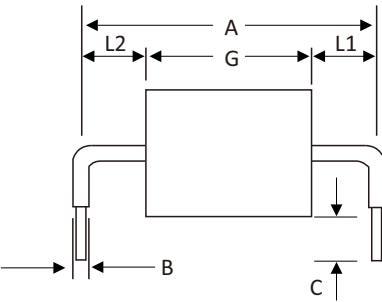
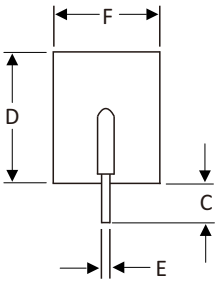


Figure 4. Typical  $V_{BR}$  Vs Junction Temperature



**DIMENSIONS**

DIM	MILLIMETERS	INCHES
A	24.15±1.00	0.950±0.04
A-530C	34.70±2.00	1.370±0.08
B	2.40±0.60	0.095±0.024
C	6.0-20.0	0.236-0.787
D	14.48max	0.570max
E	1.27±0.05	0.05±0.002
F	12.70max	0.500max
G-015C	3.60±1.0	0.142±0.04
G-030C	4.23±1.0	0.167±0.04
G-058C/066C/076C	5.08±1.0	0.200±0.04
G-170C/190C	9.20±1.0	0.362±0.04
G-240C	10.67±1.0	0.420±0.04
G-380C/430C	16.50±1.0	0.650±0.04
G-530C	27.00±1.5	1.060±0.06
L1/L2	L1=L2 tolerance±0.04inch(1.0mm)	

**Packing Options**

Part Number	Component Package	QTY	Packaging Option
AK10-XXXX	AK-Package	56pcs/Box	Bulk



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