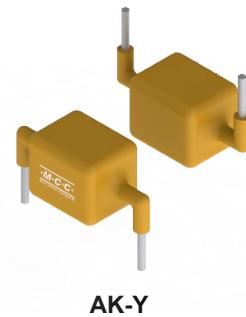


Features

- 10KA peak pulse current capability at 8/20 μ s pulse
- Transient protection to:
 - IEC 61000-4-2 (ESD) ± 30 kV (Air), ± 30 kV (Contact)
- Excellent clamping capability
- Sharp breakdown voltage
- Bi-directional
- Symmetric in leads width for easier soldering during assembly



AK-Y

**Applications**

- Server PSU & BBU
- Communication Equipment
- Energy Storage System

Mechanical Data

- Package: AK-Y
- Halogen Free. "Green" Device (Note1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Weight: Contact manufacturer

Body Marking and Pin Layout

Description	Simplified Outline	Functional Diagram
Bi-directional		

XXXX= Marking code

Ordering Information

Product Name	Packing Type	Qty/Box
AK10-XXXC-Y -BP	Box	56

For packaging details, visit our website at [Rev.5.1-12232025](https://www.mccsemi.com/Package>List</div>
<div data-bbox=)

Axial Leaded-10KA Transient Voltage Suppression Diode

Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Peak Pulse Current with a 8/20 μs	I_{PP}	10	kA
Operating Junction Temperature Range	T_J	-55 to 150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^\circ\text{C}$

Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

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

MCC Part Number	Reverse Stand-off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current @8/20 μs (Note2)	Maximum Reverse Leakage @ V_R	Marking Code
		V_{RMW} (V)	Min (V)	Max (V)	I_T (mA)	V_c (V)	I_{PP} (kA)	I_R (μA)
AK10-380C-Y	380	401	443	10	570	10	10	AK10-380C
AK10-430C-Y	430	440	490	10	625	10	10	AK10-430C
AK10-560C-Y	560	585	650	10	790	10	10	AK10-560C

Note:

2. Using 8/20 μs wave shape as defined in IEC 61000-4-5.

Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

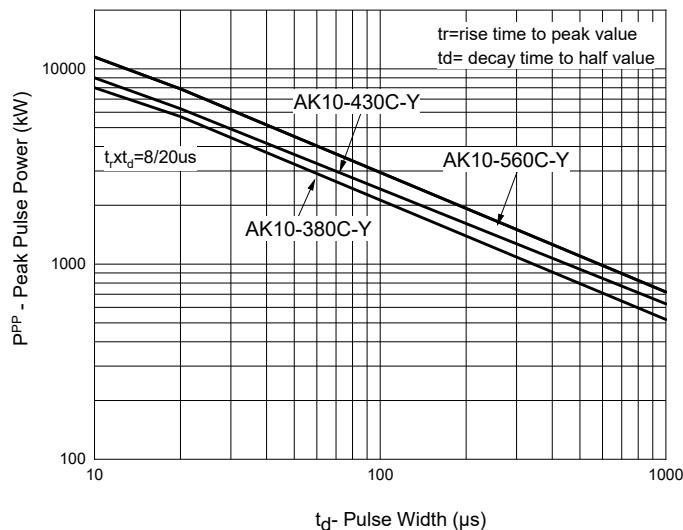


Fig. 2 - Pulse Derating Curve

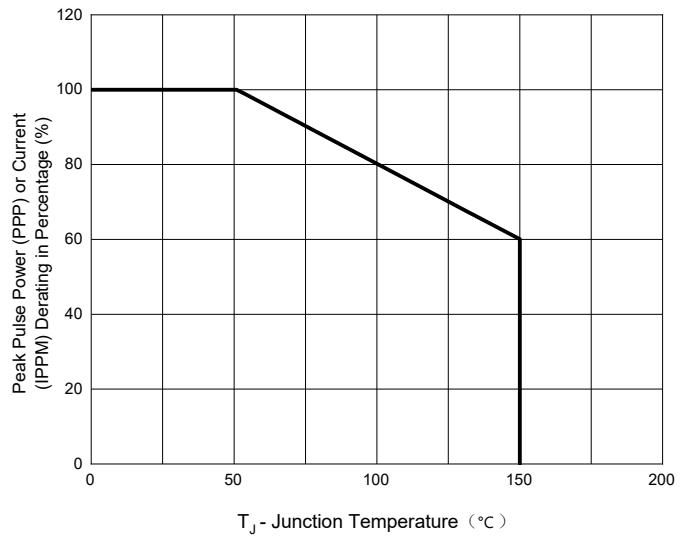
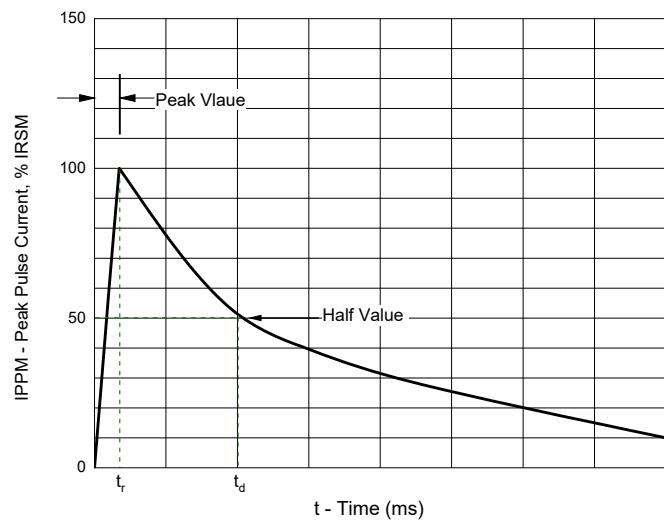
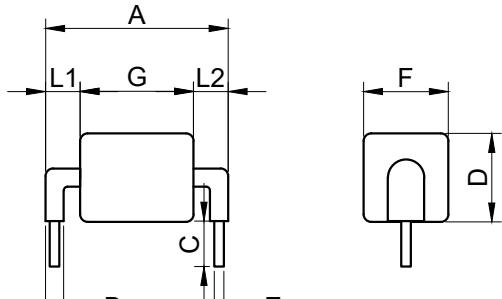


Fig. 3 - Pulse Waveform

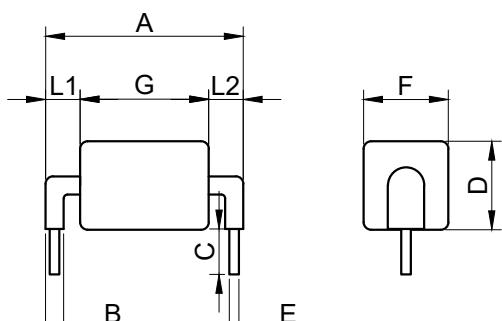


Package Outline



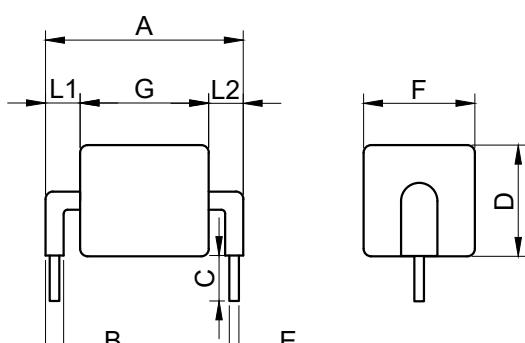
DIM	INCH		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.911	0.990	23.15	25.15	
B	0.071	0.118	1.80	3.00	
C	0.197	0.276	5.00	7.00	
D	0.394	0.528	10.00	13.40	
E	0.046	0.054	1.17	1.37	
F	0.394	0.488	10.00	12.40	
G-380C	0.394	0.591	10.00	15.00	
G-430C	0.394	0.591	10.00	15.00	
G-560C	0.630	0.827	16.00	21.00	
L1/L2	L1=L2 tolerance +/-0.047inch(1.2mm)				

Note:Applicable to the AK3-Y series



DIM	INCH		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.911	0.990	23.15	25.15	
B	0.071	0.118	1.80	3.00	
C	0.197	0.276	5.00	7.00	
D	0.437	0.571	11.10	14.50	
E	0.046	0.054	1.17	1.37	
F	0.437	0.531	11.10	13.50	
G-380C	0.591	0.787	15.00	20.00	
G-430C	0.591	0.787	15.00	20.00	
G-560C	0.630	0.827	16.00	21.00	
L1/L2	L1=L2 tolerance +/-0.047inch(1.2mm)				

Note:Applicable to the AK6-Y series



DIM	INCH		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.911	0.990	23.15	25.15	
B	0.071	0.118	1.80	3.00	
C	0.197	0.276	5.00	7.00	
D	0.531	0.665	13.50	16.90	
E	0.046	0.054	1.17	1.37	
F	0.531	0.626	13.50	15.90	
G-380C	0.591	0.787	15.00	20.00	
G-430C	0.622	0.819	15.80	20.80	
G-560C	0.630	0.827	16.00	21.00	
L1/L2	L1=L2 tolerance +/-0.047inch(1.2mm)				

Note:Applicable to the AK10-Y series

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