




Features

- Halogen-Free
- RoHS compliant
- Foldbak™ technology for superior clamping factor
- Glass Passivated Junction
- Bi-directional
- Ultra Compact: 12 times less volume than traditional discrete solutions
- Very Low Clamping Voltage
- Sharp Breakdown Voltage
- Low Slope Resistance

Agency Approvals

AGENCY	AGENCY FILE NUMBER
	E128662

Maximum Ratings and Thermal Characteristics


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

Parameter	Symbol	Value	Unit
Operating Junction and Storage Temperature Range	T_J, T_{STG}	(-) 55 to 150	$^{\circ}\text{C}$
Current Rating ¹	I_{PP}	10	kA

Note:

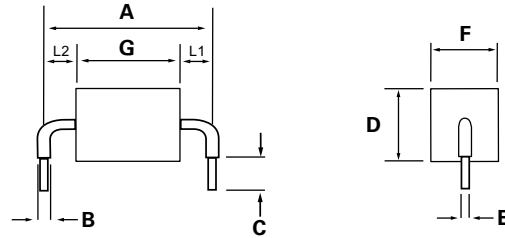
1. Rated I_{PP} measured with $8 \times 20\mu\text{s}$ pulse.

Electrical Characteristics

Part Numbers	Standoff Voltage (V_{SO}) Volts	Max. Reverse Leakage (I_R) @ V_{SO} μA	Reverse Breakdown Voltage (V_{BR}) @ I_T		Test Current I_T (mA)	Max. Clamping Voltage V_{CL} @ Peak Pulse Current (I_{PP}) (Note 1)		Max. Temp Coefficient of V_{BR} (%/ $^{\circ}\text{C}$)	Max. Capacitance 0 Bias 10kHz (nF)	Agency Approval 
			Min Volts	Max Volts		V_{CL} Volts	I_{PP} Amps			
AK10 - 058C	58	20	64	70	10	110	10,000	0.1	6.5	X
AK10 - 076C	76	20	85	95	10	140	10,000	0.1	6.5	X
AK10 - 170C	170	20	180	220	10	260	10,000	0.1	2.8	X
AK10 - 190C	190	20	200	245	10	290	10,000	0.1	2.5	X
AK10 - 240C	240	20	250	285	10	340	10,000	0.1	2.2	X
AK10 - 380C	380	20	401	443	10	520	10,000	0.1	2.0	X
AK10 - 430C	430	20	440	490	10	625	10,000	0.1	1.4	X

Note: Using $8 \times 20\mu\text{s}$ wave shaped defined in IEC 61000-4-5.

Dimensions

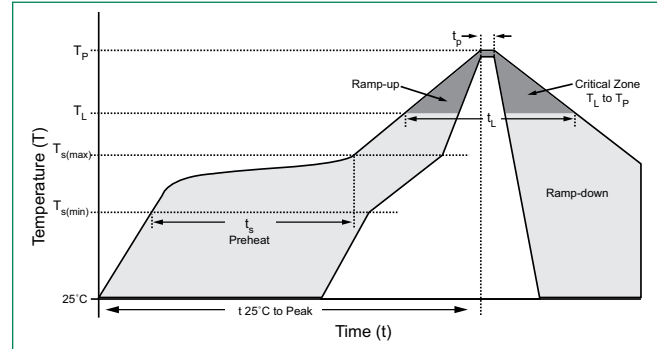


Dimensions	Inches	Millimeters
A	0.950	24.15
B	0.095	2.4
C - 058C/076C	0.236	6.00
C	0.145	3.68
D	0.570 max.	14.48 max.
E	0.050	1.270
F	0.500 max.	12.70 max.
G - 058C/076C	0.200	5.08
G - 170C/190C	0.362	9.2
G - 240C	0.420	10.67
G - 380C/430C	0.650	16.50
L1	0.310	7.87
L1 - 380C/430C	0.177	4.5

L2= A - (G+L1) tolerance +/- 0.04 inch (1.0 mm)

Soldering Parameters

Reflow Condition		Lead-free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	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_s)	60 – 150 seconds
Peak Temperature (T_p)		260 ^{+0/-5} °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



Flow/Wave Soldering (Solder Dipping)

Peak Temperature :	265°C
Dipping Time :	10 seconds
Soldering :	1 time

Physical Specifications

Weight	Contact manufacturer
Case	Epoxy encapsulated
Terminal	Silver plated leads, solderable per MIL-STD-202 Method 208

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

Peak Power Derating

