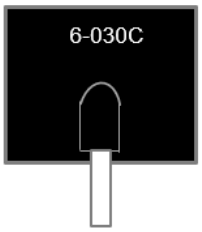
Features

RoHS Compliant



- Very low clamping voltage
- Ultra compact: less than one-tenth the size of traditional discrete solutions • Sharp breakdown voltage
- Low slope resistance
- Bi-directional
- Foldbak technology for superior clamping factor
- Symmetric in leads width for easier soldering during assembly.
- IEC-61000-4-2 ESD 15kV(Air), 8kV (Contact)
- ESD protection of data lines in accordance with IEC 61000-4-2
- EFT protection of data lines in accordance with IEC 61000-4-4
- Halogen-free
- RoHS compliant
- Glass passivated junction
- Pb-free E4 means 2nd level interconnect is Pb-free and the terminal finish material is silver

Function Diagram

Bi-direcctional

Maximum Ratings and Thermal Characteristics (T_A=25°C unless otherwise noted)			
Parameter	Symbol	Value	Unit
Operating Temperature Range	T_J	-55 to 150	°C
Storage Temperature Range	T_{STG}	-55 to 150	°C
Current Rating[1]	I_{PP}	6	kA

AGENCY	AGENCY FILE NUMBER
®	Pending

Notes:

1. Rated IPP measured with 8/20μS pulse.

Characteristics (T =25°C unless otherwise noted)

Part Numbers	Part Marking	Standoff Voltage (V_{SO}) Volts	Max. Reverse Leakage (I_R) @V_{SO} μA	Typical I_R @ 85°C (μA)	Reverse Breakdown Voltage (V_{BR}) @ I_T		Test Current I_T	Max. Clamping Voltage V_{CL} @ I_{pp} Peak Pulse Current (I_{PP}) (Note 1)		Max. Temp Coefficient OF V_{BR}	Max. Capacitance 0 Bias 10kHz	Agency Approval
					Min Volts	Max Volts	(mA)	V_{CL} Volts	I_{PP} Amps	(%/°C)	(nF)	
SCAK6 - 030C	6-030C	30	10	15	32	37	10	90	6000	0.1	11.0	
SCAK6 - 058C	6-058C	58	10	15	64	70	10	110	6000	0.1	8.0	
SCAK6 - 066C	6-066C	66	10	15	72	80	10	120	6000	0.1	6.0	
SCAK6 - 076C	6-076C	76	10	15	85	95	10	140	6000	0.1	6.5	
SCAK6 - 170C	6-170C	170	10	15	180	220	10	260	6000	0.1	2.8	
SCAK6 - 190C	6-190C	190	10	15	200	245	10	290	6000	0.1	2.5	
SCAK6 - 240C	6-240C	240	10	15	250	285	10	340	6000	0.1	2.0	
SCAK6 - 380C	6-380C	380	10	15	401	443	10	520	6000	0.1	1.4	
SCAK6 - 430C	6-430C	430	10	15	440	490	10	625	6000	0.1	1.0	

Wave Solder Profile

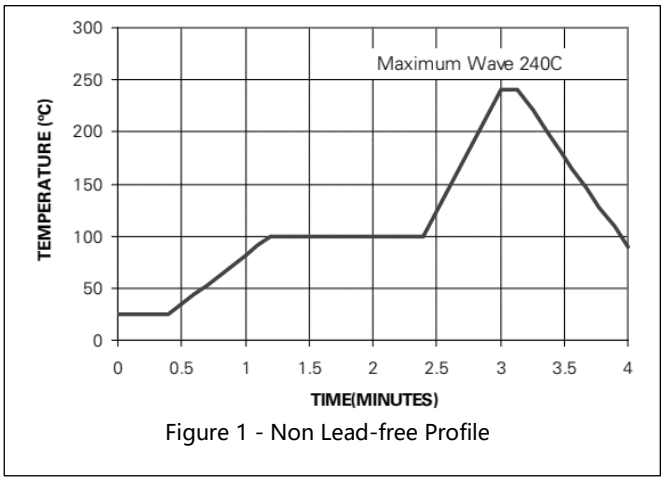


Figure 1 - Non Lead-free Profile

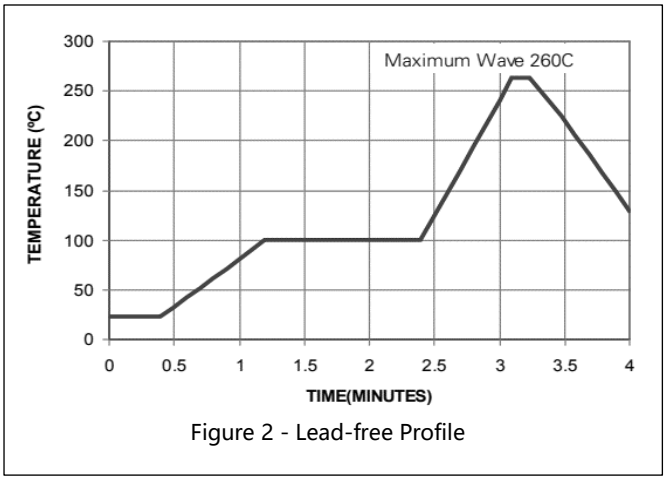


Figure 2 - Lead-free Profile

Ratings and Characteristic Curves (T =25°C unless otherwise noted)

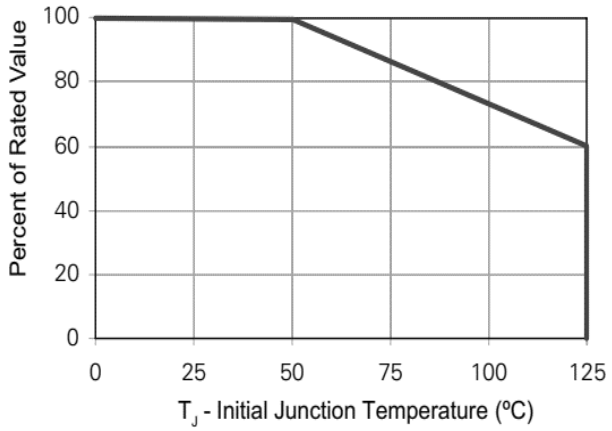


Figure 1. Peak pulse power derating curve

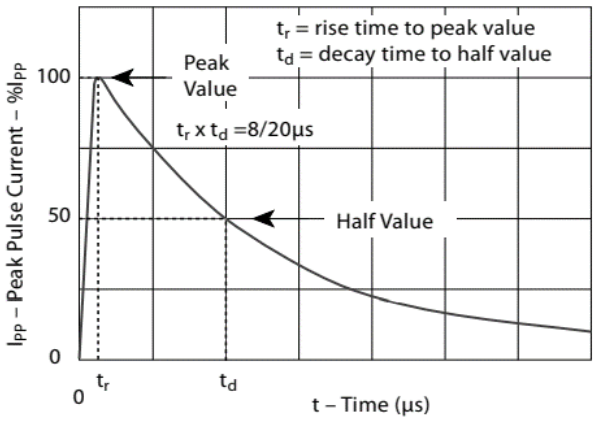


Figure2. Pulse waveform

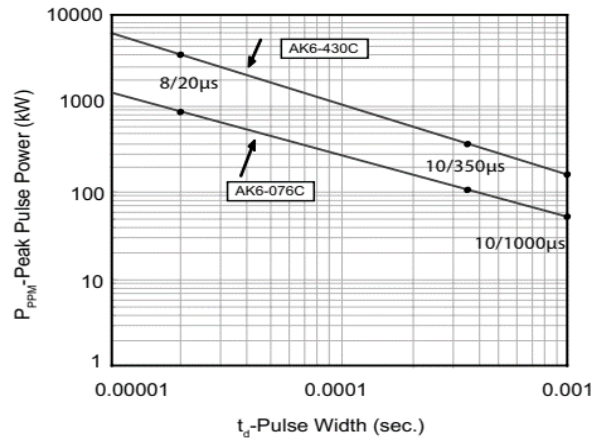


Figure 3. Peak pulse power rating curve

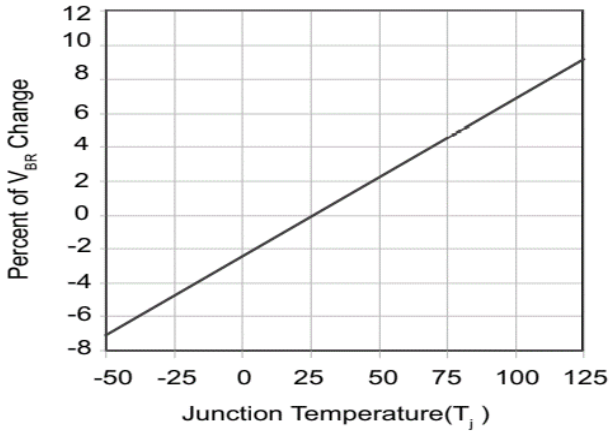


Figure 4 - Typical V_{BR}Vs Junction Temperature

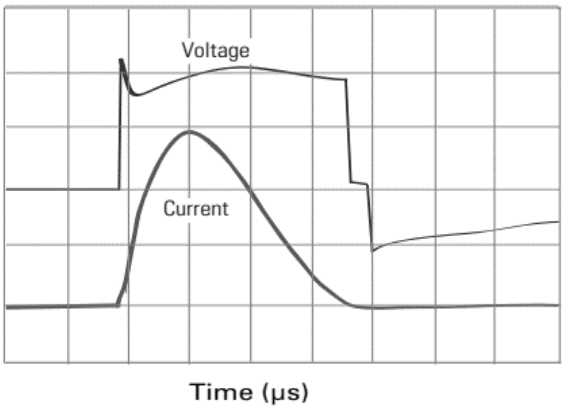
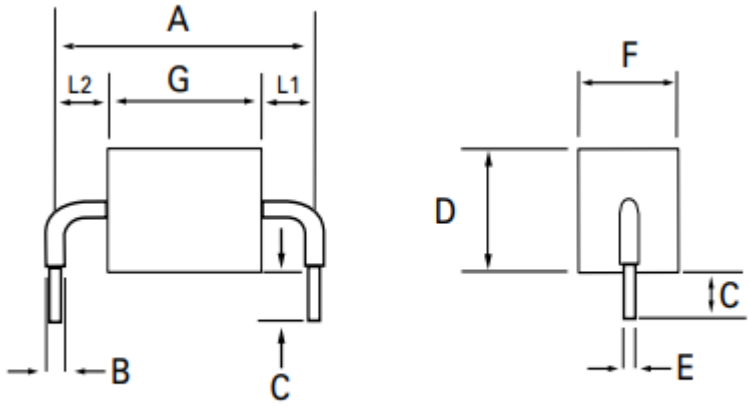


Figure 5 - Surge Response (8/20 Surge current waveform)

Note:

The power dissipation causes a change in avalanche voltage during the surge and the avalanche voltage eventually returns to the original value when the transient has passed.

Dimensions



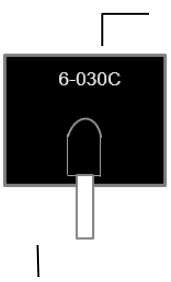
Symbol		Dimensions	
		Inches	Millimeters
A		0.951 +/- 0.039	24.15 +/- 1.00
B		0.094 +/- 0.024	2.4 +/- 0.60
C		0.236 +/- 0.039	6.00 +/- 1.00
D		0.570 Max	14.48 Max
E		0.050 +/- 0.002	1.27 +/- 0.050
F		0.500 Max	12.70 Max
G	015C / 025C	0.169 +/- 0.047	4.30 +/- 1.20
	030C / 042C	0.197 +/- 0.047	5.00 +/- 1.20
	058C / 066C/ 076C	0.228 +/- 0.047	5.80 +/- 1.20
	100C	0.260 +/- 0.047	6.60 +/- 1.20
	133C	0.287 +/- 0.047	7.30 +/- 1.20
	170C / 190C	0.346 +/- 0.047	8.80 +/- 1.20
	240C	0.406 +/- 0.047	10.30 +/- 1.20
	275C / 300C	0.496 +/- 0.047	12.60 +/- 1.20
	380C/430C	0.559 +/- 0.047	14.20 +/- 1.20
L1/L2		L1=L2 tolerance +/- 0.047 inch (+/- 1.2 mm)	

Part Numbering

SCAK6 XX XX

- XX (last): A: Uni-directional / CA: Bi-directional
- XX (middle): Reverse Standard off Voltage V_R
- SCAK6: Product series

Part Marking



Packing

Part number	Package name	Small packing quantity	Packing method
SCAK6XXXX	AK Package	56	Bulk

Revision history of Specification

Version	Change Items	Effective Date
1.0	Initial Release	15-Aug-2021