

FEATURES

- | Bi-directional
- | Halogen-free
- | 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)



AK3

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Storage Temperature Range	T_{STG}	-55~150	$^{\circ}\text{C}$
Operating junction Temperature Range	T_J	-55~125	$^{\circ}\text{C}$
Current Rating	I_{PP}	3	KA

Notes:
 Rated I_{pp} measured with 8/20 μs pluse

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Part Number	Device Marking Code	Reverse Stand-off Voltage	Breakdown Voltage V _{BR} @I _T		Test Current I _T	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
		V _{RWM} (V)	Min(V)	Max(V)	(mA)	V _C (V)	I _{PP} (A)	I _R (μA)
AK3-015C	3-015C	15	16	19	10	28	3000	10
AK3-020C	3-020C	20	22	24	10	50	3000	10
AK3-025C	3-025C	25	28	30	10	60	3000	10
AK3-030C	3-030C	30	32	37	10	80	3000	10
AK3-042C	3-042C	42	47	51	10	105	3000	10
AK3-058C	3-058C	58	64	70	10	110	3000	10
AK3-066C	3-066C	66	72	80	10	120	3000	10
AK3-076C	3-076C	76	85	95	10	140	3000	10
AK3-100C	3-100C	100	110	122	10	165	3000	10
AK3-133C	3-133C	133	147	162	10	220	3000	10
AK3-150C	3-150C	150	158	194	10	230	3000	10
AK3-170C	3-170C	170	179	220	10	260	3000	10
AK3-190C	3-190C	190	200	245	10	290	3000	10
AK3-208C	3-208C	208	223	246	10	305	3000	10
AK3-240C	3-240C	240	250	285	10	340	3000	10
AK3-275C	3-275C	275	300	335	10	435	3000	10
AK3-300C	3-300C	300	330	366	10	470	3000	10
AK3-380C	3-380C	380	401	443	10	520	3000	10
AK3-430C	3-430C	430	440	490	10	625	3000	10

CHARACTERISTIC CURVES

Fig.1 V-I Curve characteristics

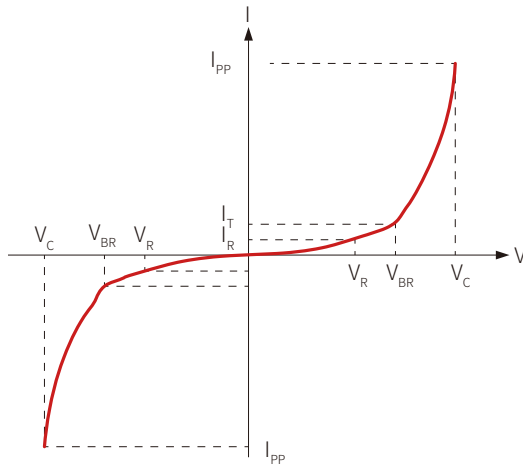


Fig.2 Pulse derating Curve

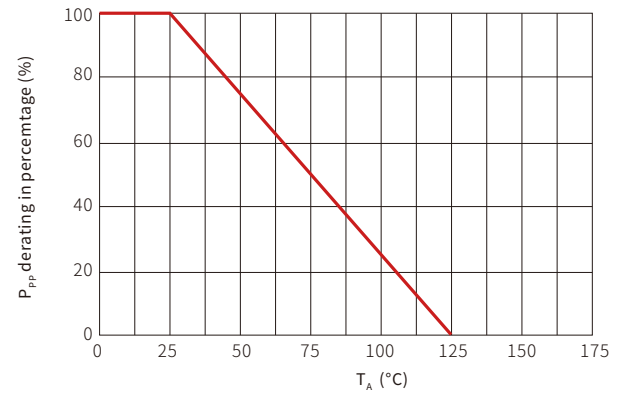


Fig.3 Pulse Waveform

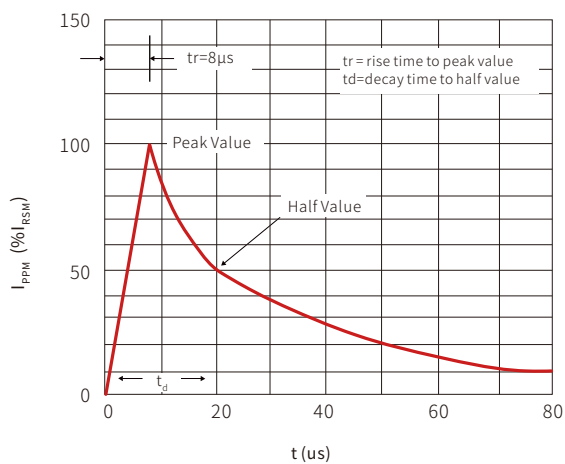
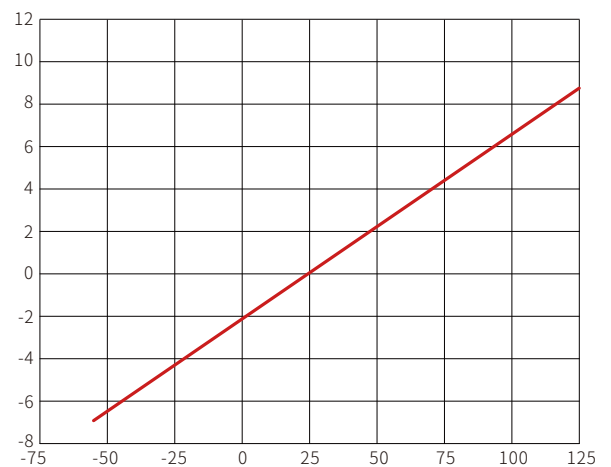
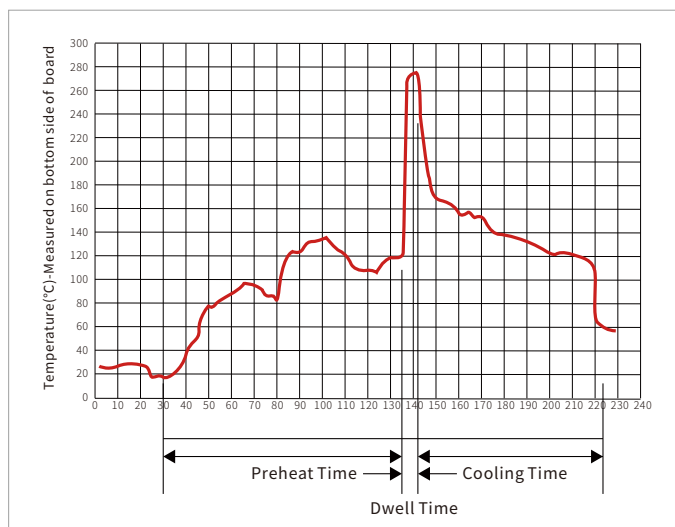


Fig.4 Typical V_{BR} Vs Junction Temperature

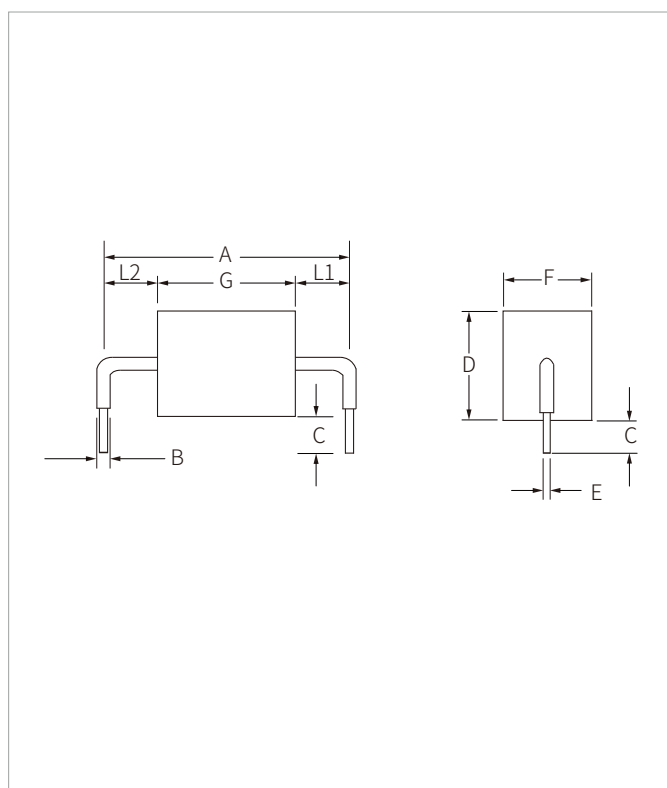


WAVE SOLDERING



Wave Parameter		Lead-free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time(min to max)	60 – 180 secs
Solder pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds

AK3 PACKAGE INFORMATION



Ref.		Millimeters		Inches	
		Min.	Max.	Min.	Max.
A		23.15	25.15	0.911	0.990
B		2.34	2.46	0.092	0.097
C		5.00	7.00	0.197	0.276
D		14.0Max		0.551Max	
E		1.22	1.32	0.048	0.052
F		14.0Max		0.551Max	
G-	15C-25C	4.00Max		0.157Max	
	30C-42C	5.00Max		0.197Max	
	58C-76C	6.00Max		0.236Max	
	100C-133C	8.00Max		0.315Max	
	170C-190C	10.0Max		0.394Max	
	240C-300C	14.0Max		0.551Max	
	380C-430C	17.0Max		0.670Max	
L1/L2		L1=L2 tolerance±0.047inch±(1.20mm)			

ORDERING INFORMATION

Part Number	Component Package	QTY	Packaging Option
AK3	AK3	84pcs/Box	Bulk

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By QR Code

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