

### Primary Characteristics

$I_F$	5	A
$V_{RRM}$	50~600	V
$I_{FSM}$	150	A
$V_F$	0.95~1.7	V

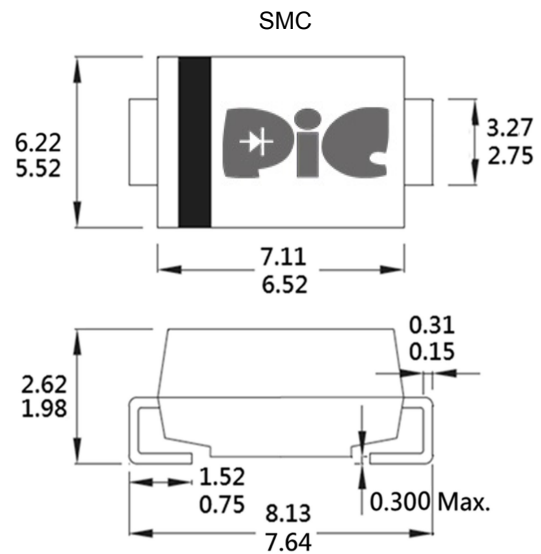
### Features

- $I_O$  5.0A
- $V_{RRM}$  50V-600V
- High surge current capability

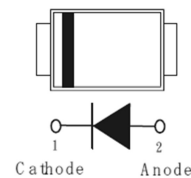
### Mechanical Data

- Case: Molded plastic body
- Mounting Position : Any

### Package Outline Dimensions



Unit: millimeters



### Maximum Ratings & Electrical Characteristic $T_A=25^\circ\text{C}$ unless otherwise specified

Parameter	SYMBOL	EK5A	EK5B	EK5D	EK5G	EK5J	UNITS
Marking Code	-	EK5A	EK5B	EK5D	EK5G	EK5J	-
Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	V
Average Forward Current 60HZ Half-sine wave, Resistance load,	$T_A=50^\circ\text{C}$ $I_{F(AV)}$	5.0					A
Surge (Non-Repetitive) Forward Current 60HZ Half-sine wave, 1 cycle, $T_A=25^\circ\text{C}$	$I_{FSM}$	150					A
Peak Forward Voltage $I_F=5.0A$	$V_F$	0.95		1.25		1.7	V
Peak Reverse Current at $V_{RM}=V_{RRM}$	$T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$ $I_R$	5.0 100					$\mu\text{A}$
Reverse Recovery time $I_F=0.5A, I_R=1A, I_{RR}=0.25A$	$T_{rr}$	35					nS
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	50					$^\circ\text{C/W}$
	$R_{\theta JL}$	12					$^\circ\text{C/W}$
Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150					$^\circ\text{C}$

#### Notes:

- (1) Thermal Resistance from junction to ambient and from junction to lead mounted on P.C.B. with  $0.3'' \times 0.3''$  (8.0mm x 8.0mm) copper pad areas.

### Rating & Characteristic Curves

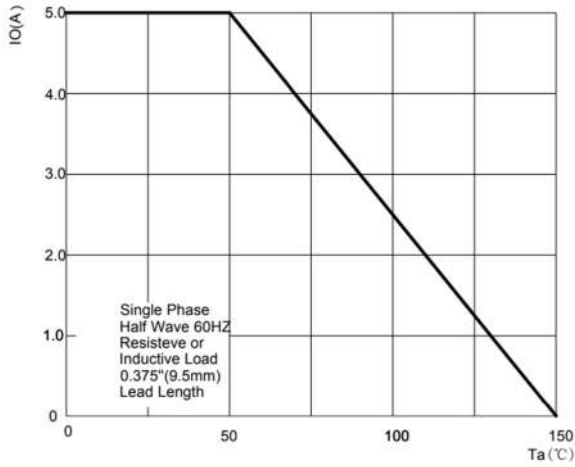


Fig. 1 Forward Current Derating Curve

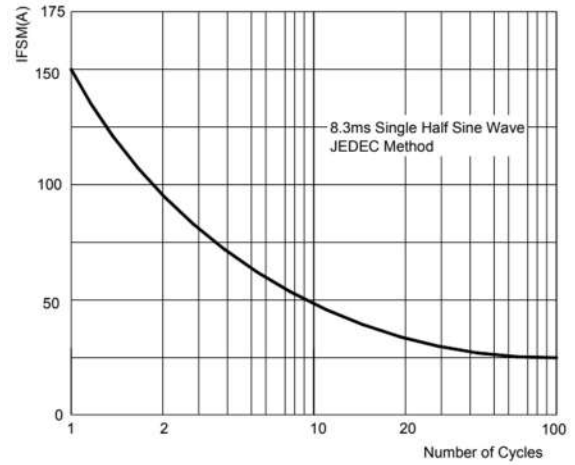


Fig. 2 Max. Non-Repetitive Peak Forward Surge Current

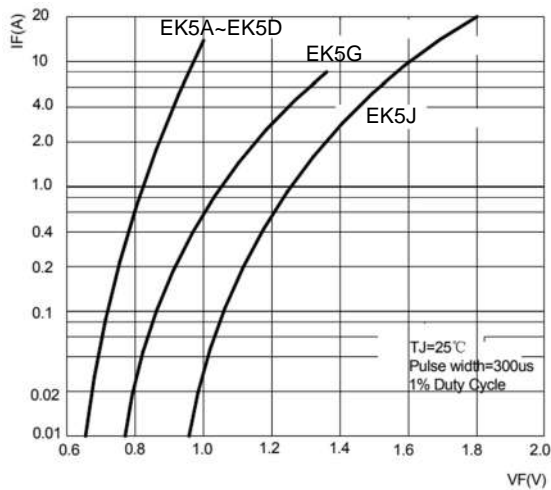


Fig. 3 Typical Forward Characteristics

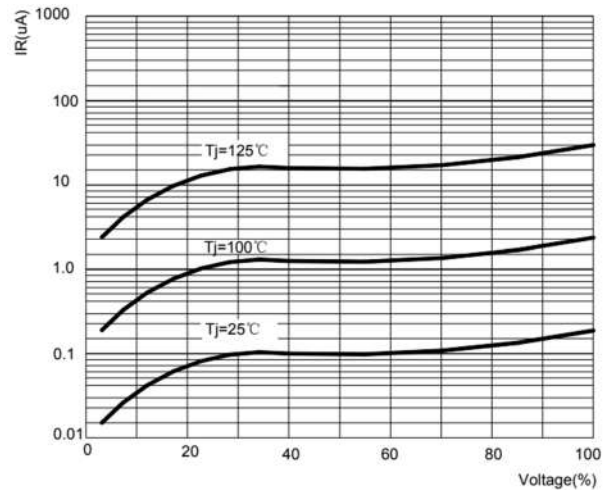
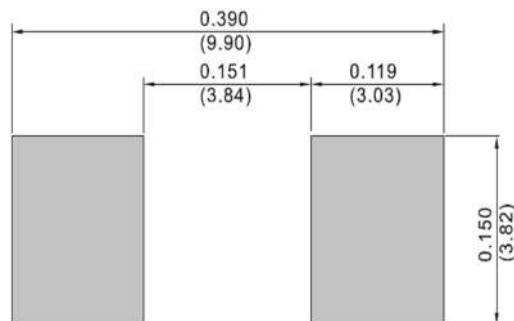


Fig. 4 Typical Reverse Characteristics

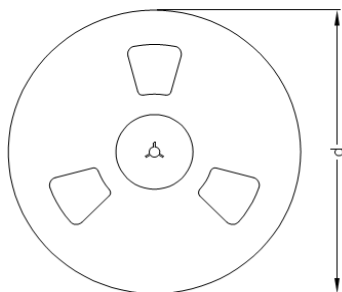
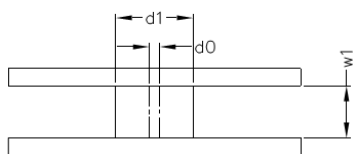
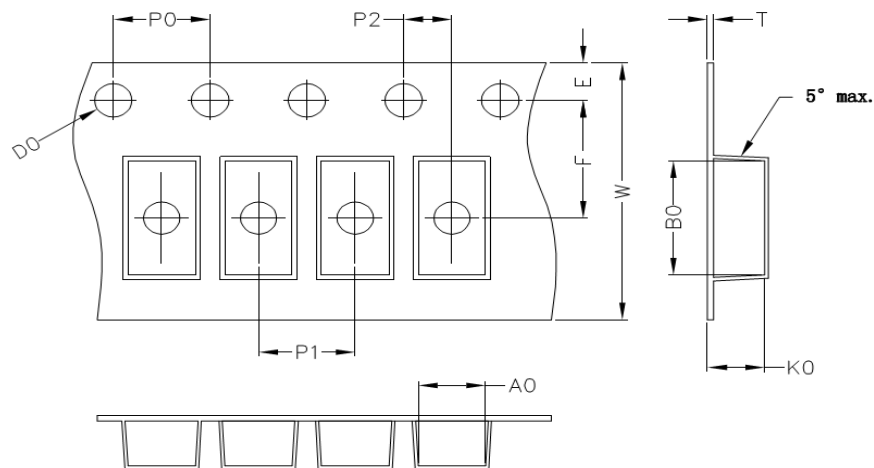
### Suggested Pad Layout



Unit: inch (mm)

### Packaging Specifications

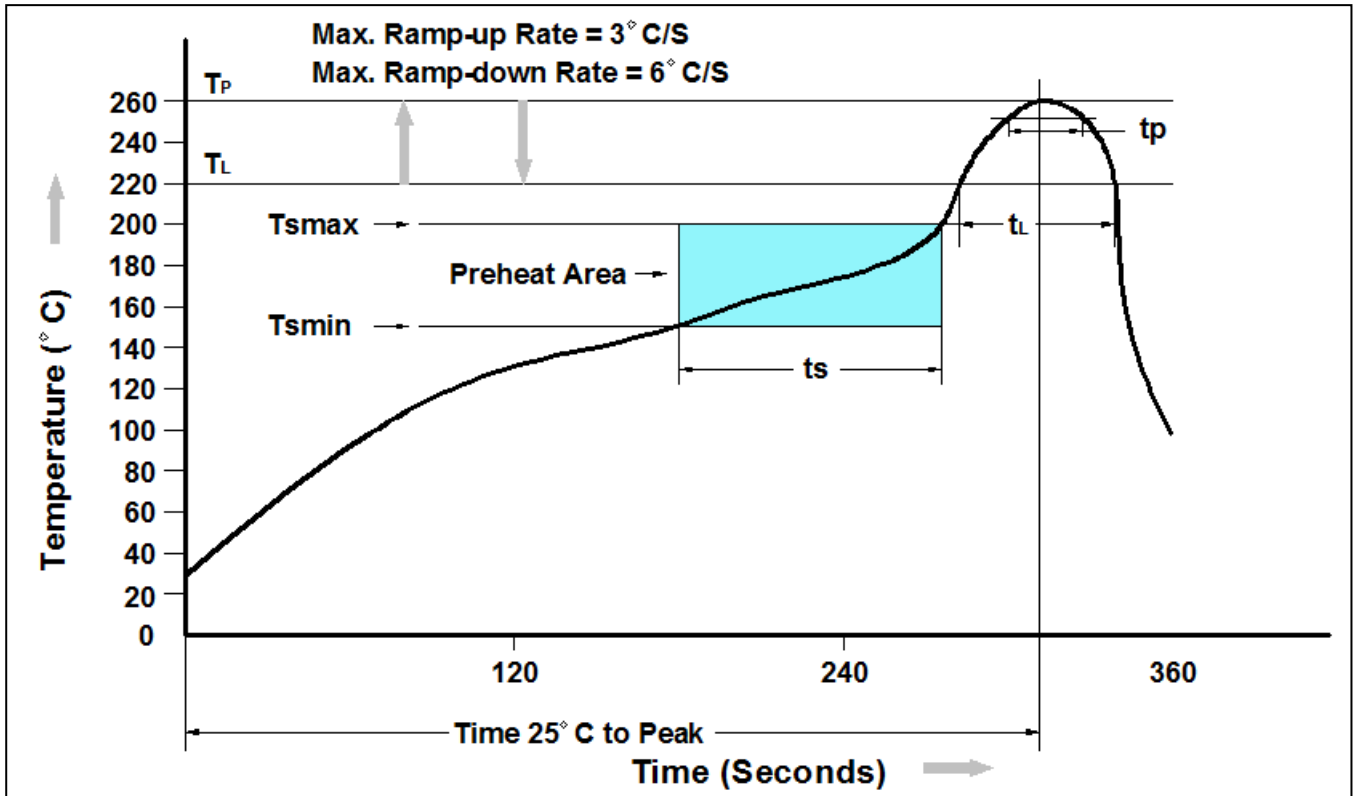
Package	A0 (mm)	B0 (mm)	K0 (mm)	D0 (mm)	E (mm)	F (mm)	P0 (mm)	P1 (mm)	P2 (mm)	T (mm)	W (mm)
SMA	2.8±0.1	5.33±0.1	2.36±0.1	1.55±0.1	1.75±0.1	5.50±0.1	4.0±0.1	4.0±0.01	2±0.1	0.25±0.1	9.4±0.1
SMB	3.8±0.1	5.40±0.1	2.45±0.1	1.55±0.1	1.75±0.1	5.50±0.1	4.0±0.1	8.0±0.01	2±0.1	0.25±0.1	9.4±0.1
SMC	6.05±0.1	8.31±0.1	2.54±0.1	1.55±0.1	1.75±0.1	7.50±0.1	4.0±0.1	8.0±0.05	2±0.1	0.25±0.1	12±0.1



Package	D1 (mm)	D0 (mm)	W1 (mm)	D (mm)
SMA	75	13.5	13.5	330
SMB	75	13.5	13.5	330
SMC	75	13.5	17.0	330

NOTE : The tolerance of reel is ±2mm

### Recommend IR Reflow Soldering Thermal Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (T Amin)	150°C
Temperature Max. (Tsmax)	200°C
Time (ts) from (T Amin to Tsmax)	60-120 seconds
Average Ramp-up Rate (tL to tP)	3°C/second max.
Liquidous Temperature (TL)	217°C
Time (tL) Maintained Above (TL)	60 – 150 seconds
Peak Temperature	260°C +0°C / -5°C
Time (tP) within 5°C of actual Peak Temperature	30 seconds
Ramp-down Rate (TP to TL)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.

### Ordering Information

Part Number	Description	Quantity
EK5A~EK5J	SMC Reel	3000 pcs

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