



ER3AC THRU ER3KC

3.0 AMP Surface Mount Superfast Rectifiers

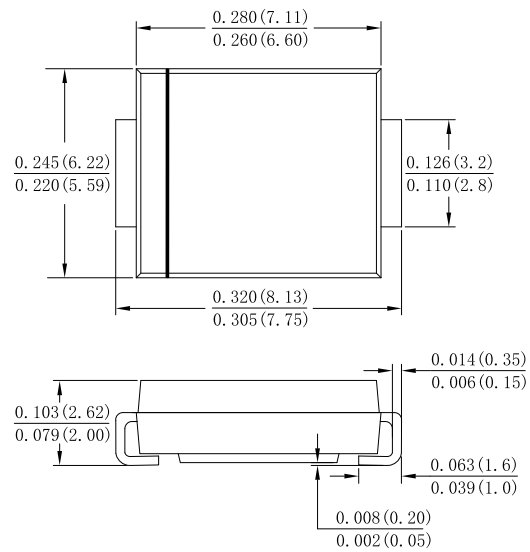
Features

- Glass passivated junction chip
- Low Power Loss, High Efficiency
- Ideally Suited for Automatic Assembly
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V- 0

Mechanical Data

- Case: Molded plastic SMC
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band dented cathode end
- Mounting Position: Any
- Making: Type Number

Case: SMC(DO-214AB)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified
Single phase, half wave, 60Hz, resistive or inductive load
For capacitive load derate current by 20%

Type Number	Symbols	ER3AC	ER3BC	ER3DC	ER3GC	ER3JC	ER3KC	Units	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	V	
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	V	
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	V	
Average Rectified Output Current @T _L =100 °C	I _{F (AV)}	3.0						A	
Non-Repetitive Peak Forward Surge @T _j =25 °C Current 8.3ms Single half sine-wave@T _j =125 °C Superimposed On Rated Load (JEDEC Method)	I _{FSM}	110 88						A	
Non-Repetitive Peak Forward Surge @T _j =25 °C Current 1.0ms Single half sine-wave @T _j =125°C Superimposed On Rated Load (JEDEC Method)	I _{FSM}	220 176						A	
10000 times of the wave surge current (time width 1ms, time interval 3s)	I _{FSM}	82.5						A	
I ² t Rating for Fusing (t < 8.3ms)	I ² t	41.5						A ² S	
Forward Voltage @IF=3A	V _F	0.95			1.3		1.7	1.9	V
Peak Reverse Current @T _A =25 °C	I _R	3.0						uA	
At Rated DC Blocking Voltage @T _A =125°C		100							
Maximum Reverse Recovery Time (Note 1)	T _{rr}	35						ns	
Typical Junction Capacitance (Note 2)	C _J	45			30			pF	
Typical Thermal Resistance	R _{θJL}	17						°C/W	
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150						°C	

Note:

1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.
2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C.



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Fig. 1 Forward Current Derating Curve

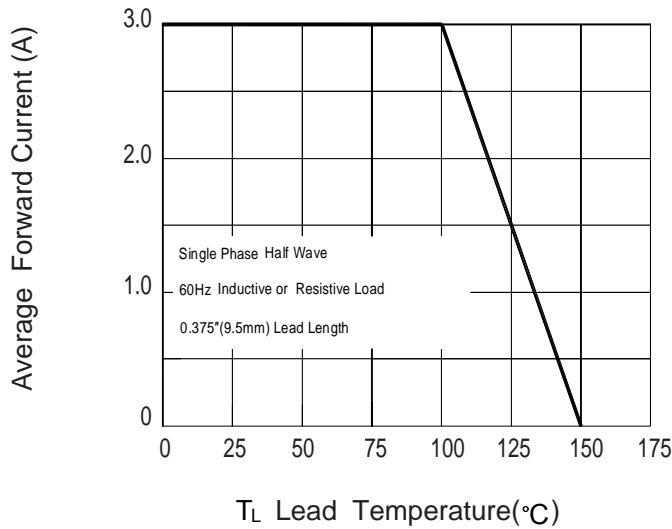


Fig. 2 Typ. Forward Characteristics

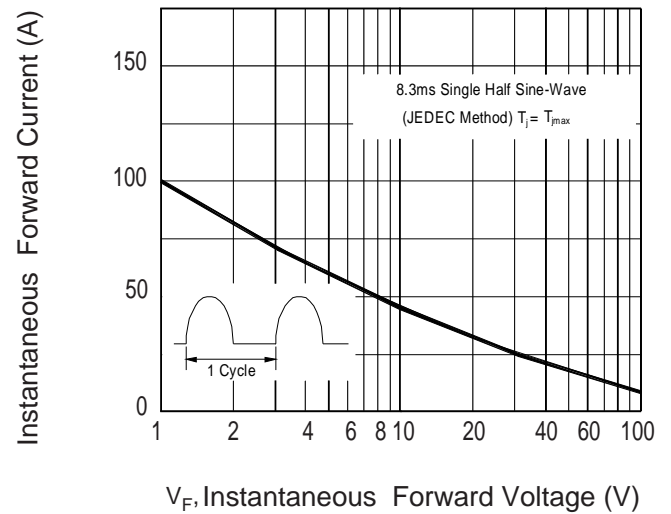


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

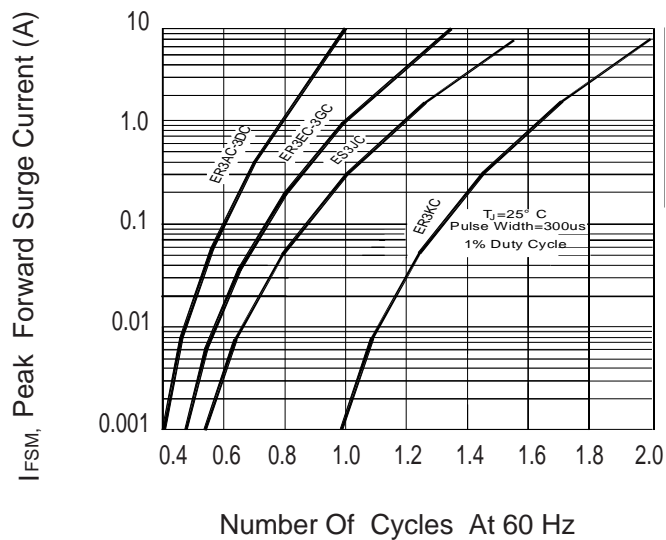


Fig.4 Typical Reverse Characteristics

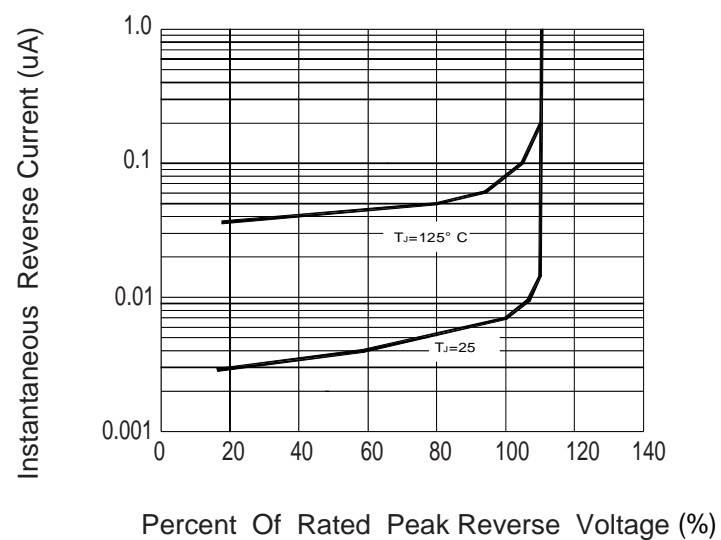


Fig.5 Typical Junction Capacitance

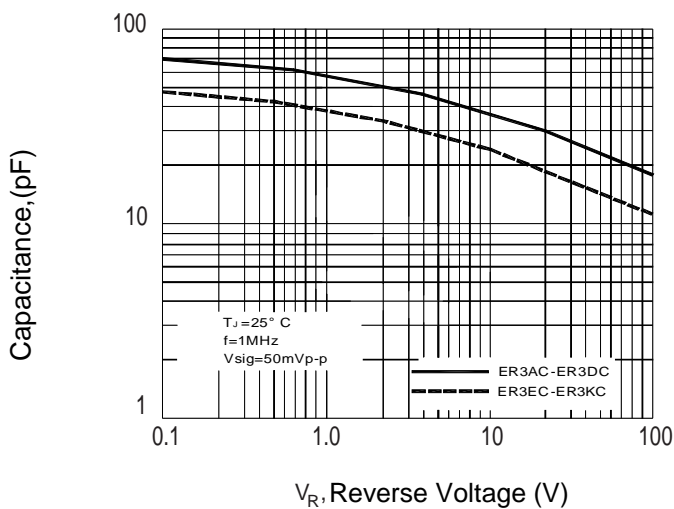
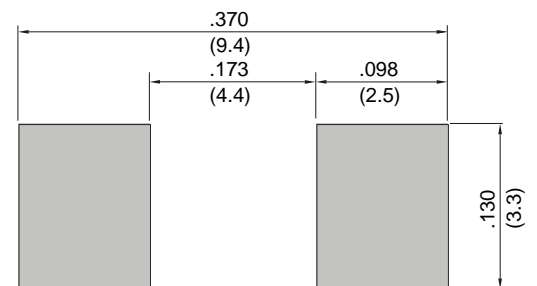


Fig.6 Mounting PAD Layout





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