



ER5A THRU ER5K

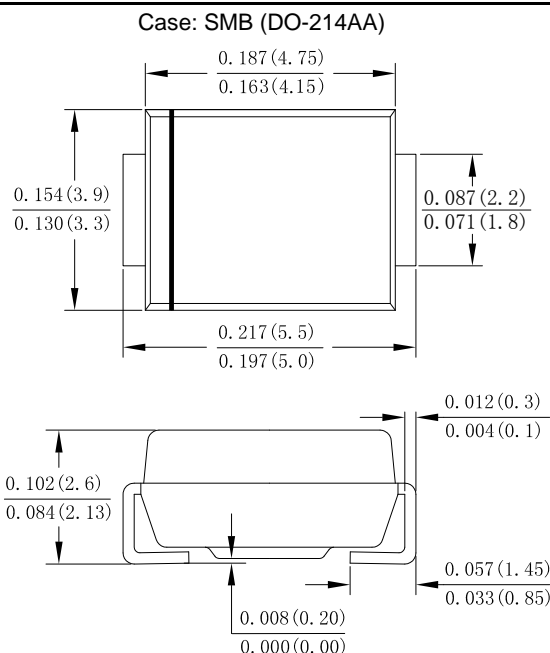
5.0AMP Surface Mount Superfast Rectifiers

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 SMB
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Marking: Type Number



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	ER5A	ER5B	ER5D	ER5G	ER5J	ER5K	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℃	I _{F (AV)}	5.0						A	
Non-Repetitive Peak Forward Surge @T _j =25 ℃ Current 8.3ms Single half sine-wave@T _j =125 ℃ Superimposed On Rated Load (JEDEC Method)	I _{FSM}	150 120						A	
Non-Repetitive Peak Forward Surge @T _j =25 ℃ Current 1.0ms Single half sine-wave @T _j =125℃ Superimposed On Rated Load (JEDEC Method)	I _{FSM}	300 240						A	
10000 times of the wave surge current (time width 1ms, time interval 3s)	I _{FSM}	112.5						A	
I ² t Rating for Fusing (t < 8.3ms)	I ² t	93.375						A ² S	
Forward Voltage @IF=5A	V _F	0.95			1.3		1.7	1.9	V
Peak Reverse Current @T _A =25℃	I _R	5.0						uA	
At Rated DC Blocking Voltage @T _A =125℃		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}	25						℃/W	
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 to +150						℃	

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.



ER5A THRU ER5K

5.0AMP Surface Mount Superfast Rectifiers

Fig. 1 Forward Current Derating Curve

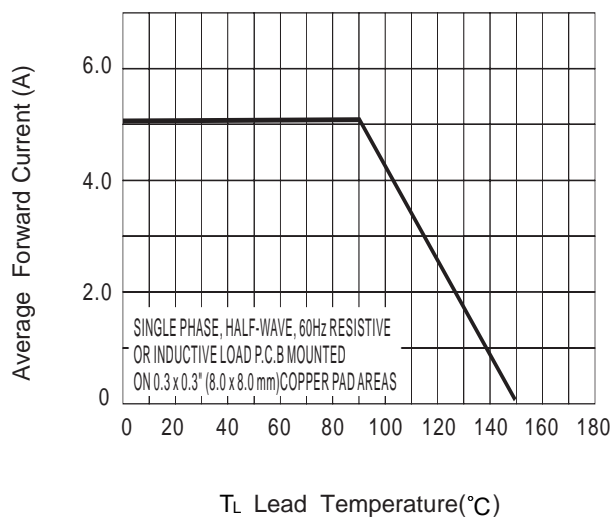


Fig. 2 Typ. Forward Characteristics

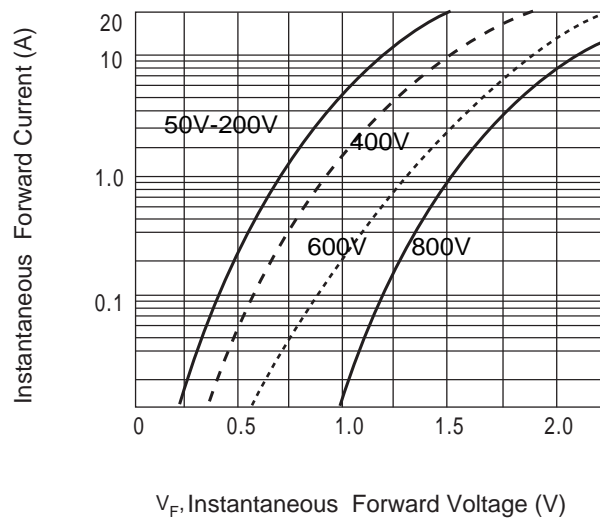


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

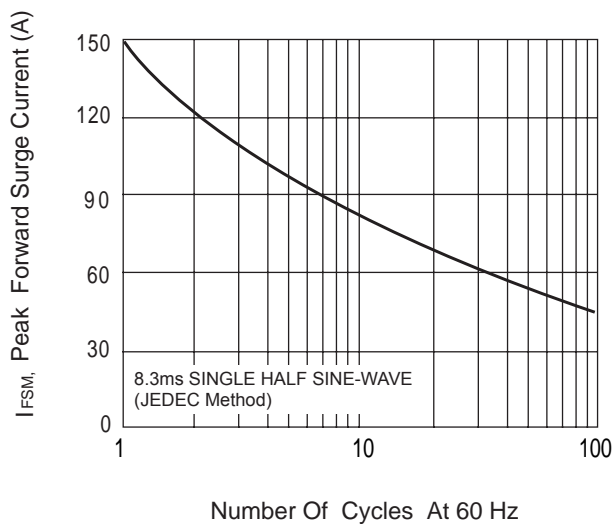


Fig4 Typical Reverse Characteristics

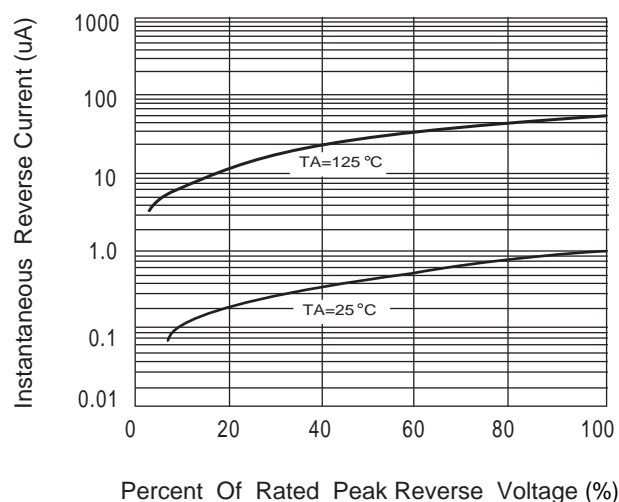
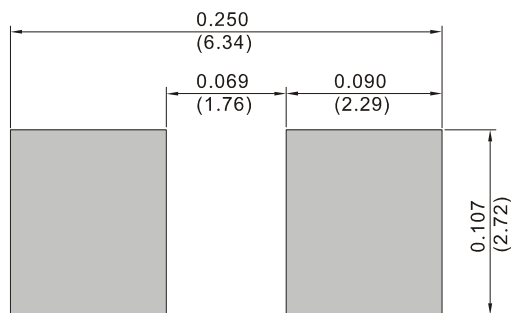


Fig.5 Mounting PAD Layout





Important Notice and Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from XINNUO
- XINNUO reserves the right to make changes to this document and its products and specifications
- XINNUO disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- XINNUO does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the here in document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications.

XINNUO makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown here in are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify XINNUO for any damages resulting from such improper use or sale.
- Since XINNUO uses lot number as the tracking base, please provide the lot number for tracking when complaining.