

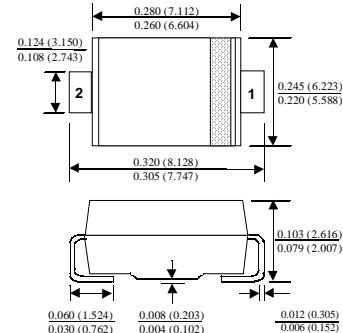
## S3A - S3M

### Features

- Low profile package.
- Glass passivated junction.



**SMC/DO-214AB**  
COLOR BAND DENOTES CATHODE



## 3.0 Ampere General Purpose Rectifiers

### Absolute Maximum Ratings\* $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$I_O$	Average Rectified Current @ $T_A = 100^\circ\text{C}$	3.0	A
$i_f(\text{surge})$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	100	A
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	2.7 21	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient **	47	$^\circ\text{C}/\text{W}$
$T_{\text{stg}}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-55 to +150	$^\circ\text{C}$

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

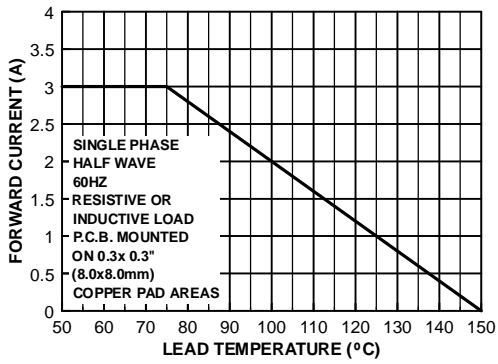
\*\*Device mounted on FR-4 PCB 0.013 mm.

### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

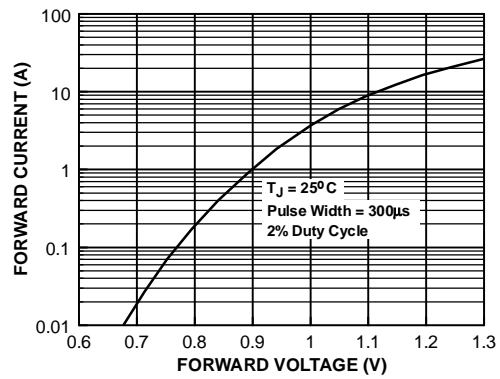
Parameter	Device							Units
	3A	3B	3D	3G	3J	3K	3M	
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
DC Reverse Voltage (Rated $V_R$ )	50	100	200	400	600	800	1000	V
Maximum Reverse Current @ rated $V_R$ $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	5.0 250							$\mu\text{A}$ $\mu\text{A}$
Maximum Forward Voltage @ 3.0 A	1.2							V
Maximum Reverse Recovery Time $I_F = 0.5 \text{ A}$ , $I_R = 1.0 \text{ A}$ , $I_{rr} = 0.25 \text{ A}$	2.5							$\mu\text{S}$
Typical Junction Capacitance $V_R = 4.0 \text{ V}$ , $f = 1.0 \text{ MHz}$	60							pF

Typical Characteristics

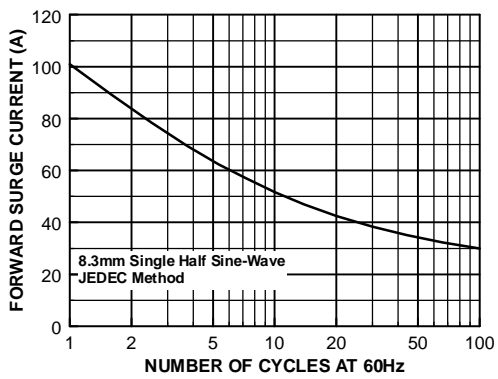
Forward Current Derating Curve



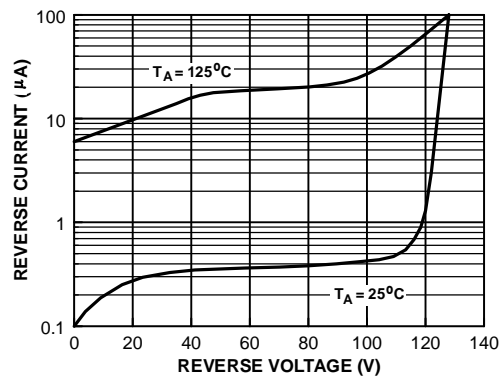
Forward Characteristics



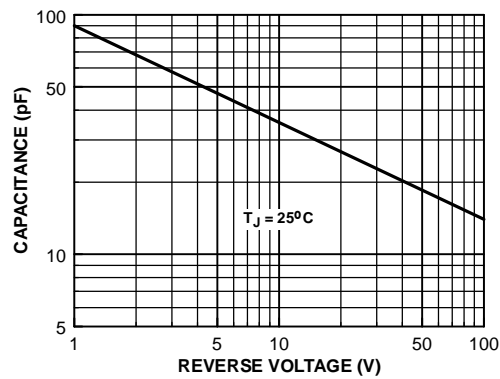
Non-Repetitive Surge Current



Reverse Characteristics



Junction Capacitance



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