

### Features

- Low profile package
- Ideal for automated placement
- Ultrafast reverse recovery time
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability
- High temperature soldering:  
260°C/10 seconds at terminals
- Component in accordance to  
RoHS 2002/95/1 and WEEE 2002/96/EC



SMB (DO – 214AA)

### Mechanical Data

- **Case:** JEDEC DO-214AA molded plastic
- **Terminals:** Solder plated, solderable per  
J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end

### Major Ratings and Characteristics

$I_{F(AV)}$	1.0A
$V_{RRM}$	20 V to 100 V
$I_{FSM}$	40A
$V_F$	0.50V, 0.55V, 0.70V, 0.85V
$T_j \text{ max.}$	125 °C

### Maximum Ratings & Thermal Characteristics

( $T_A = 25\text{ °C}$  unless otherwise noted)

Items	Symbol	SS12B	SS13B	SS14B	SS15B	SS16B	SS18B	SS110B	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	40							A
Voltage rate of change (rated $V_R$ )	dv/dt	10000							V/ $\mu$ s
Thermal resistance from junction to lead <sup>(1)</sup>	$R_{\theta JL}$	25							°C/W
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +125							°C

Note 1: Mounted on P.C.B. with 0.28 x 0.28" (7.0 x 7.0mm) copper pad areas.

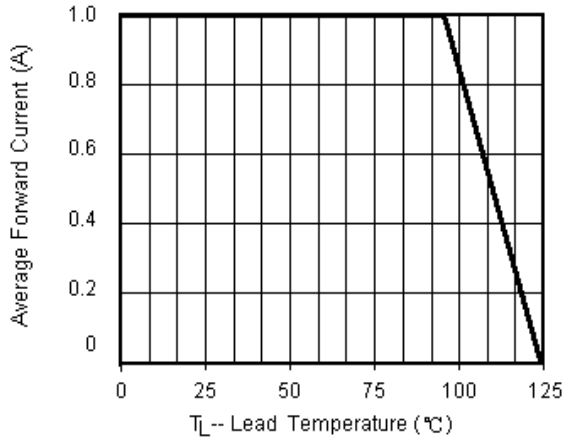
### Electrical Characteristics ( $T_A = 25\text{ °C}$ unless otherwise noted)

Items	Test conditions	Symbol	SS12B	SS13~14B	SS15~16B	SS18~110B	UNIT	
Instantaneous forward voltage	$I_F=1.0A^{(2)}$	$V_F$	0.50	0.55	0.70	0.85	V	
Reverse current	$V_R=V_{DC}$	$I_R$	$T_J=25\text{ °C}$				0.5	mA
			$T_J=125\text{ °C}$				5	

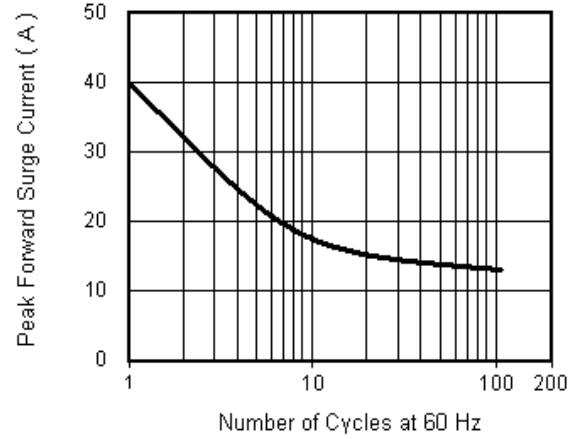
Note 2: Pulse test:300 $\mu$ s pulse width,1% duty cycle.

**Characteristic Curves** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

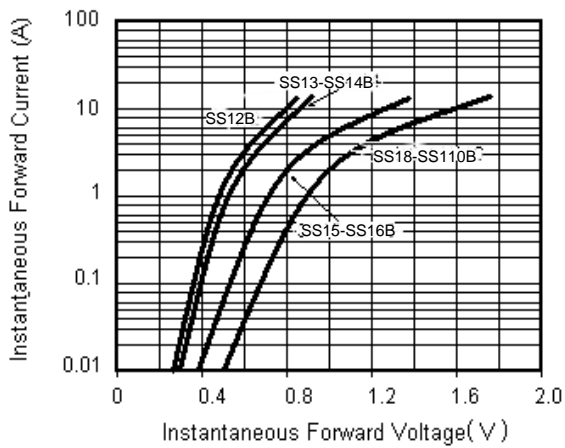
**Fig.1 Forward Current Derating Curve**



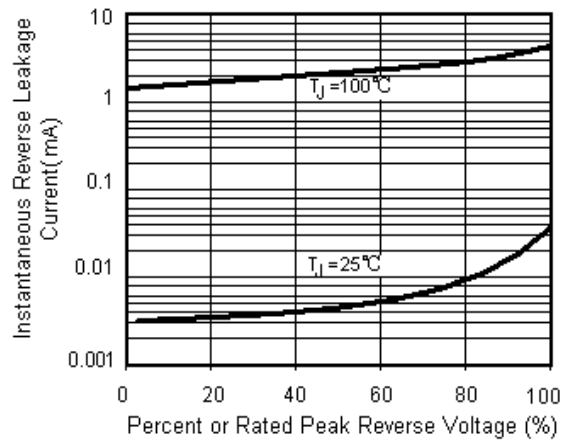
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



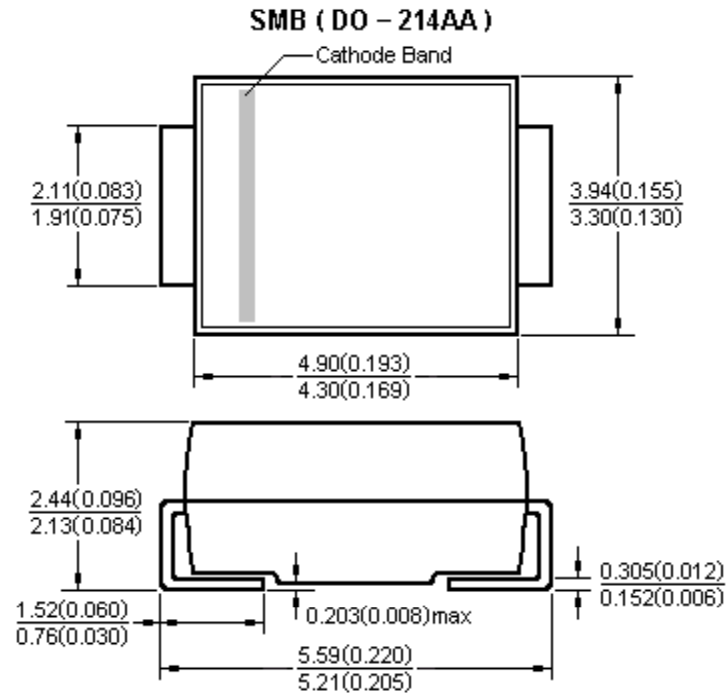
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Reverse Leakage Characteristics**



Package Outline



Dimensions in millimeters and (inches)