

### Major Ratings and Characteristics

$I_{F(AV)}$	3.0A
$V_{RRM}$	50 V to 1000 V
$I_{FSM}$	100 A
$t_{rr}$	50nS,75ns
$V_F$	1.0V,1.3V,1.7V
$T_j \text{ max.}$	150 °C



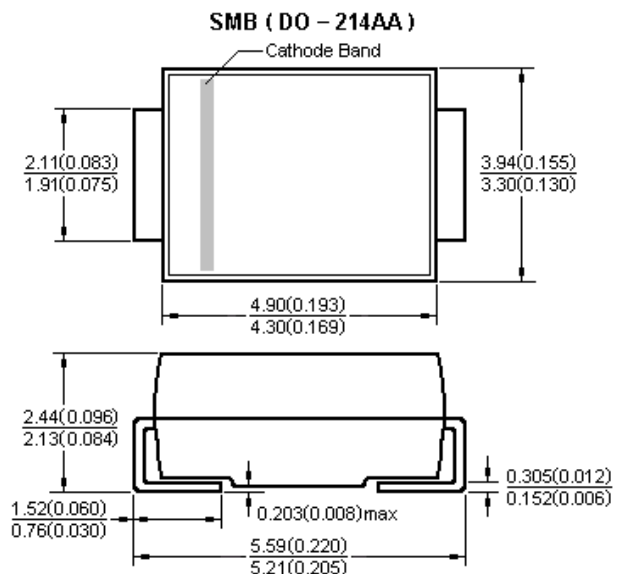
SMB (DO – 214AA)

### Features

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

### Mechanical Data

- **Case:** JEDEC DO-214ABolded plastic body over passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end



Dimensions in millimeters and (inches)

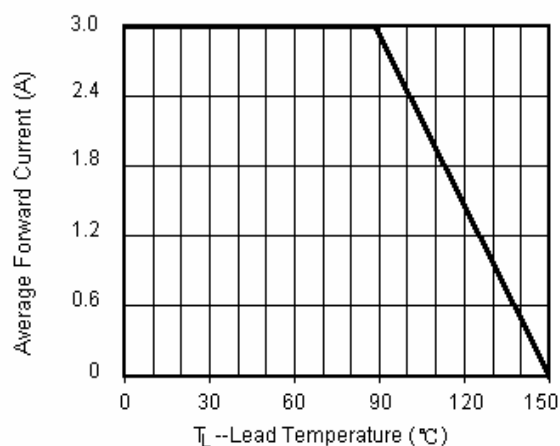
### Maximum Ratings & Thermal Characteristics & Electrical Characteristics

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

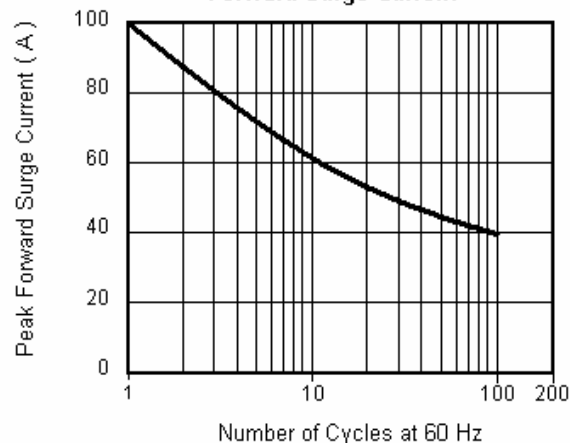
	Symbol	US3A	US3B	US3D	US3G	US3J	US3K	US3M	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	3							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	100							A
Maximum instantaneous forward voltage at 3.0A	V <sub>F</sub>	1.0			1.3	1.7			V
Maximum DC reverse current at Rated DC blocking voltage	I <sub>R</sub>	10.0							μA
T <sub>A</sub> = 25 °C T <sub>A</sub> = 100°C		50							
Maximum reverse recovery time at I <sub>F</sub> = 0.5 A , I <sub>R</sub> = 1.0 A , I <sub>rr</sub> = 0.25 A	t <sub>rr</sub>	50				75			nS
Typical junction capacitance at 4.0 V ,1MHz	C <sub>J</sub>	15							pF
Thermal resistance from junction to lead	R <sub>θJL</sub>	85							°C/ W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

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

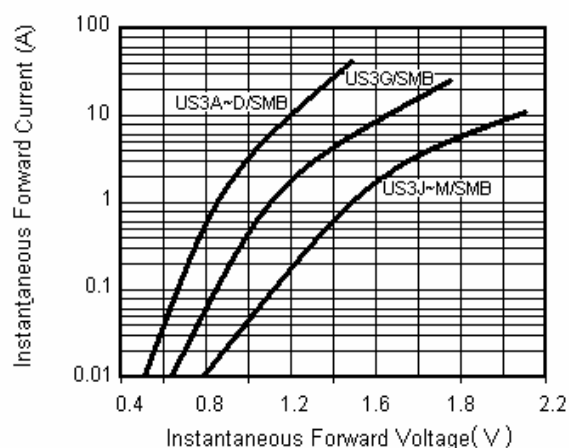
**Fig.1 Forward Current Derating Curve**



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



**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Reverse Leakage Characteristics**

