

### 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



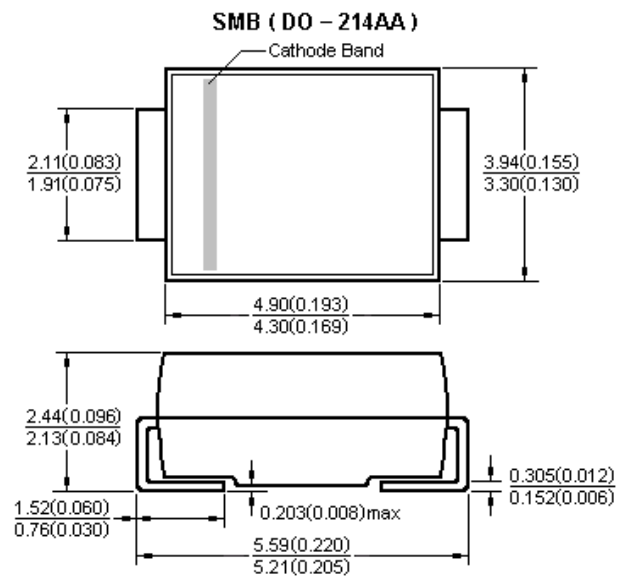
SMB (DO – 214AA)

### 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 Date

- **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	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	3							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	100							A
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.0		1.3		1.7			V
Maximum DC reverse current $T_A = 25\text{ °C}$ at Rated DC blocking voltage $T_A = 100\text{ °C}$	$I_R$	10.0 50							$\mu\text{A}$
Maximum reverse recovery time at $I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ , $I_{rr} = 0.25\text{ A}$	$t_{rr}$	50				75			nS
Typical junction capacitance at 4.0 V ,1MHz	$C_J$	15							pF
Thermal resistance from junction to lead	$R_{\theta JL}$	85							$^{\circ}\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^{\circ}\text{C}$

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

Fig.1 Forward Current Derating Curve

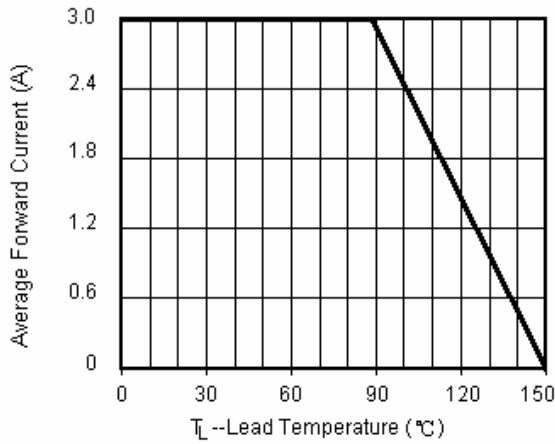


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

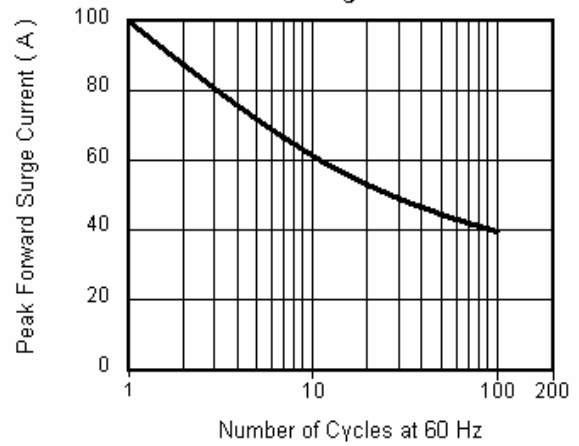


Fig.3 Typical Instantaneous Forward Characteristics

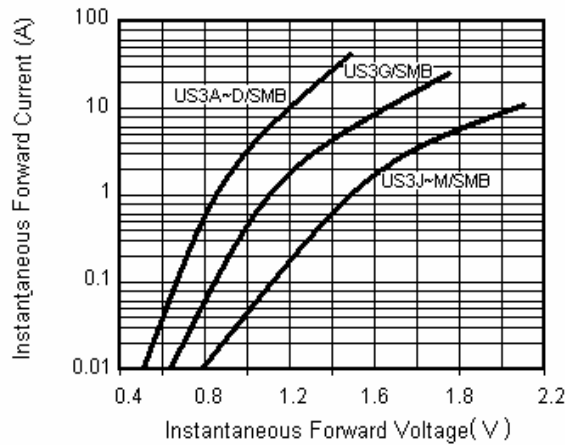


Fig.4 Typical Reverse Leakage Characteristics

