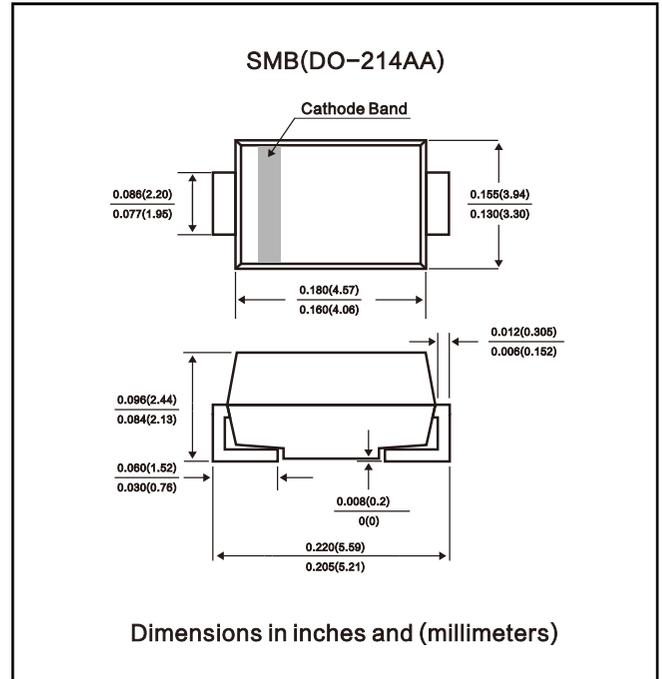


### Features

- Glass Passivated Die Construction
- Fast Recovery Time for High Efficiency
- Low Forward Voltage Drop and High Current Capability
- Ideally Suited for Automatic Assembly
- Plastic Material: UL Flammability
- Classification Rating 94V-0

### Mechanical Data

- Case: SMB(DO-214AA), Molded Plastic
- Terminals: Solder Plated Terminal - Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.093 grams (approx.)

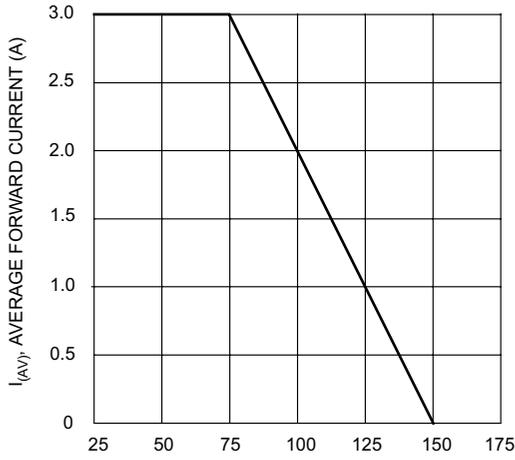


### Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

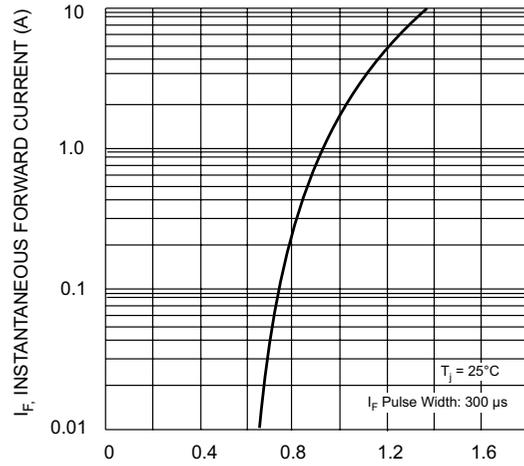
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	FR3A	FR3B	FR3D	FR3G	FR3J	FR3K	FR3M	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_T = 75^\circ\text{C}$	$I_O$				3.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$				100				A
Forward Voltage @ $I_F = 3.0\text{A}$	$V_{FM}$				1.3				V
Peak Reverse Current at Rated DC Blocking Voltage @ $T_A = 25^\circ\text{C}$ @ $T_A = 125^\circ\text{C}$	$I_{RM}$				5.0 250				$\mu\text{A}$
Maximum Recovery Time (Note 3)	$t_{rr}$	150			250		500		ns
Typical Junction Capacitance (Note 2)	$C_j$				50				pF
Typical Thermal Resistance Junction to Terminal (Note 1)	$R_{\theta JT}$				25				K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$				-65 to +150				$^\circ\text{C}$

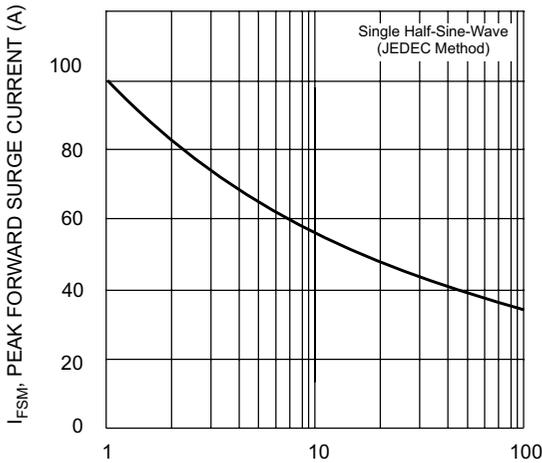
- Notes:
1. Thermal resistance: junction to terminal, unit mounted on PC board with 5.0 mm<sup>2</sup> (0.013 mm thick) copper pad as heat sink.
  2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  3. Reverse recovery test conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{rr} = 0.25\text{A}$ . See figure 5.



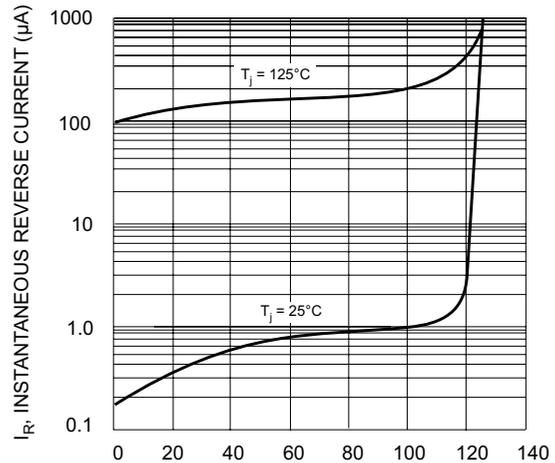
$T_T$ , TERMINAL TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



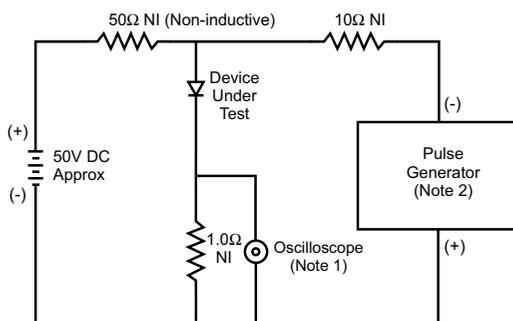
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Forward Surge Current Derating Curve



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 4 Typical Reverse Characteristics



Notes:  
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.  
2. Rise Time = 10ns max. Input Impedance = 50Ω.

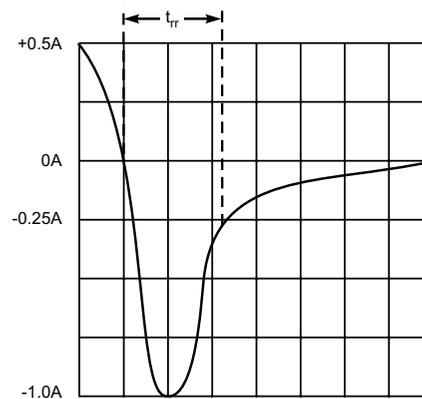


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit