

**VOLTAGE RANGE: 50 - 1000V**  
**CURRENT: 10 A**

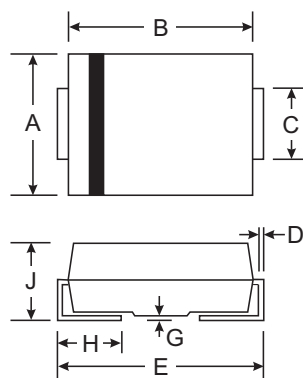


### Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop
- Low Power Loss
- Built-in Strain Relief
- Plastic Case Material has UL Flammability Classification Rating 94V-0

### Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)



| SMC/DO-214AB         |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 5.59 | 6.22 |
| B                    | 6.60 | 7.11 |
| C                    | 2.75 | 3.18 |
| D                    | 0.15 | 0.31 |
| E                    | 7.75 | 8.13 |
| G                    | 0.10 | 0.20 |
| H                    | 0.76 | 1.52 |
| J                    | 2.00 | 2.62 |
| All Dimensions in mm |      |      |

### Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

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

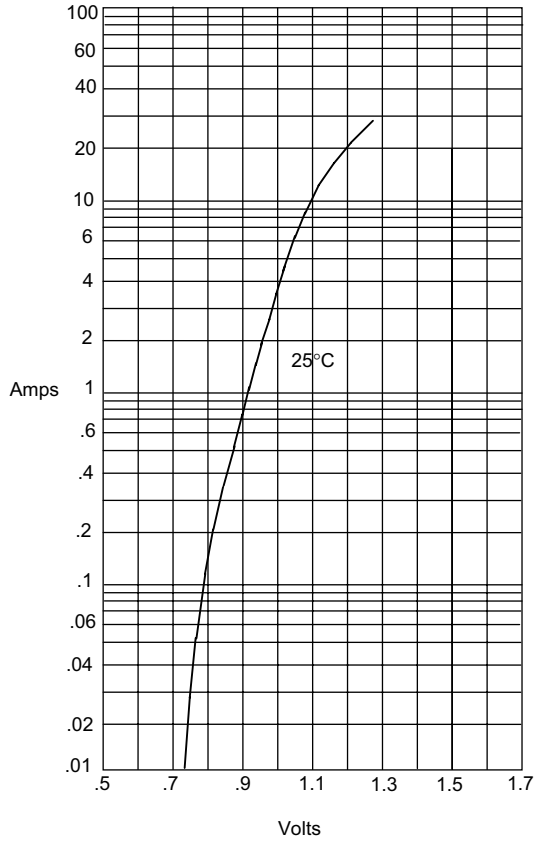
| Characteristic   | Symbol  | S10A        | S10B | S10D | S10G | S10J | S10K | S10M | Unit |
|--|---|-------------|------|------|------|------|------|------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                             | V <sub>RRM</sub><br>V <sub>VRWM</sub><br>V <sub>R</sub> | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | V    |
| RMS Reverse Voltage  | V <sub>R(RMS)</sub>                                     | 35          | 70   | 140  | 280  | 420  | 560  | 700  | V    |
| Average Rectified Output Current<br>@T <sub>A</sub> = 75°C   | I <sub>O</sub>  | 10          |      |      |      |      |      |      | A    |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>  | 200         |      |      |      |      |      |      | A    |
| Forward Voltage<br>@I <sub>F</sub> = 10A   | V <sub>FM</sub>   | 1.2         |      |      |      |      |      |      | V    |
| Peak Reverse Current<br>@T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage<br>@T <sub>A</sub> = 100°C          | I <sub>RM</sub>   | 10<br>100   |      |      |      |      |      |      | μA   |
| Typical Junction Capacitance (Note 1)  | C <sub>j</sub>  | 60          |      |      |      |      |      |      | pF   |
| Typical Thermal Resistance Junction to Ambient   | R <sub>θJA</sub>  | 10          |      |      |      |      |      |      | °C/W |
| Operating Temperature Range  | T <sub>j</sub>  | -50 to +150 |      |      |      |      |      |      | °C   |
| Storage Temperature Range  | T <sub>STG</sub>  | -50 to +150 |      |      |      |      |      |      | °C   |

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



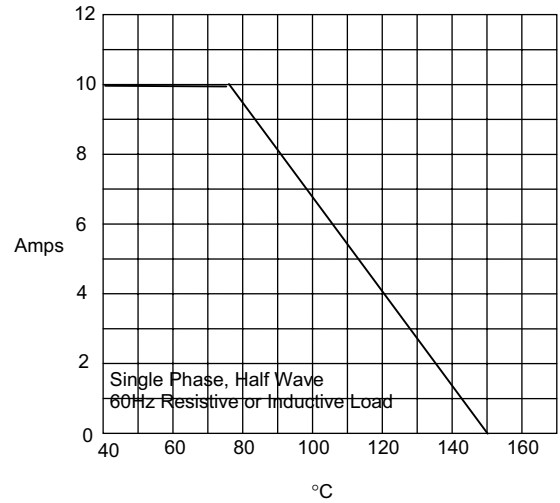
## RATINGS AND CHARACTERISTIC CURVES S10A THRU S10M

Figure 1  
Typical Forward Characteristics



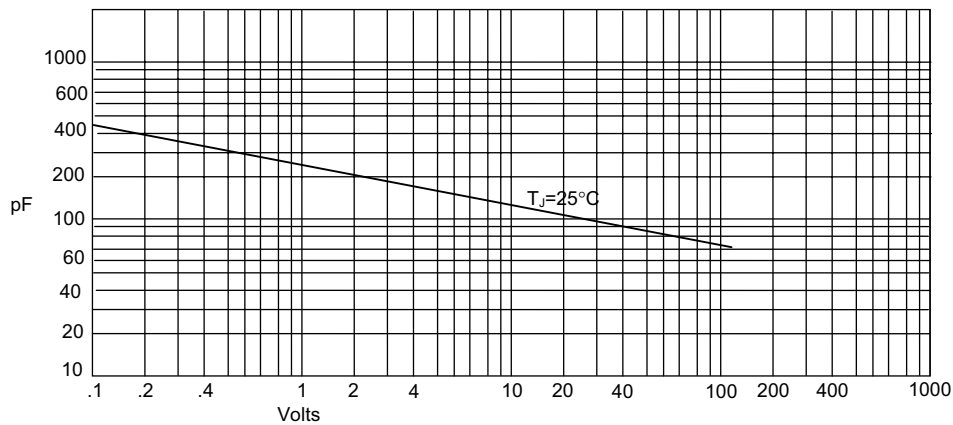
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus  
Case Temperature - °C

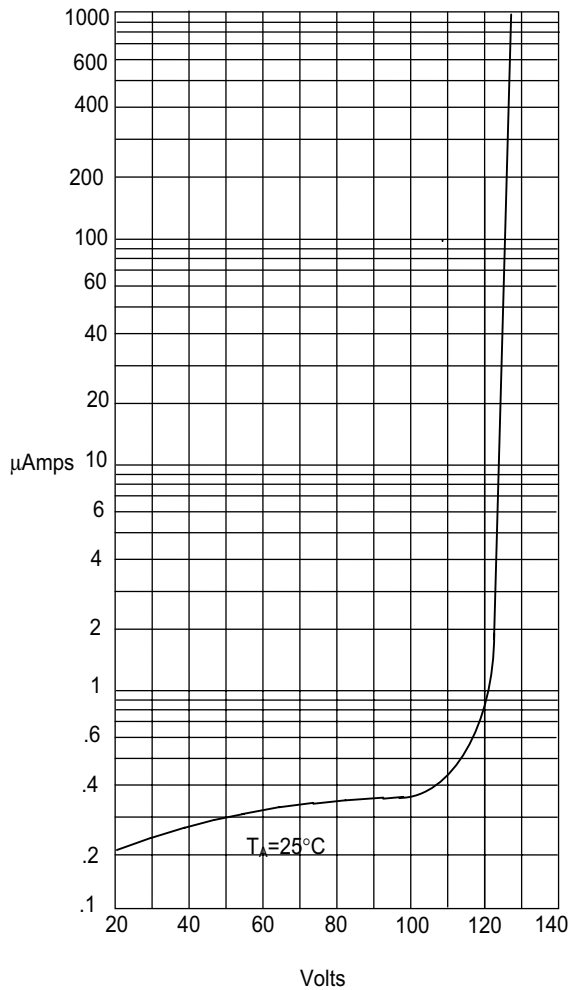
Figure 3  
Junction Capacitance



Junction Capacitance - pF versus  
Reverse Voltage - Volts

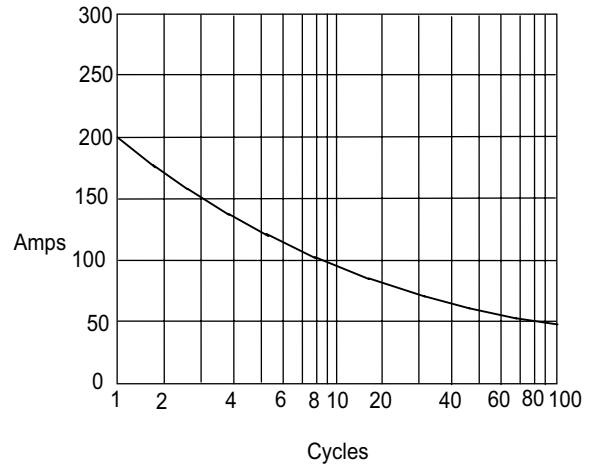
## RATINGS AND CHARACTERISTIC CURVES S10A THRU S10M

Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*  
Number Of Cycles At 60Hz - Cycles