

## S2A ~ S2M

**PRV : 50 - 1000 Volts**

**Io : 2.0 Ampere**

### FEATURES :

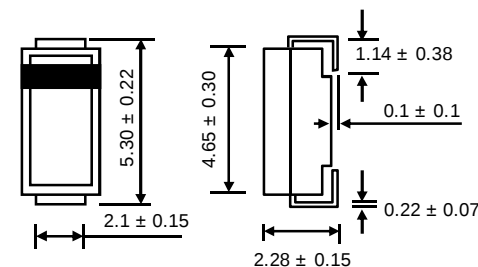
- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Pb / RoHS Free

### MECHANICAL DATA :

- \* Case : SMB Molded plastic
- \* Epoxy : UL94V-0 rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Indicated by cathode band
- \* Mounting position : Any
- \* Weight : 0.093 gram

## SURFACE MOUNT RECTIFIERS

### SMB (DO-214AA)



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

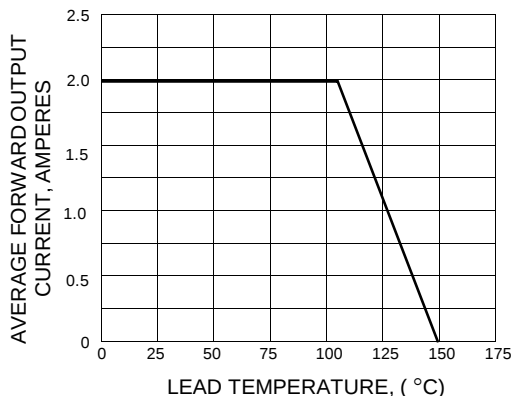
| RATING                                                                                                                                     | SYMBOL          | S2A           | S2B | S2D | S2G | S2J | S2K | S2M  | UNIT                 |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|-----|-----|-----|-----|-----|------|----------------------|
| 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 Current at $T_L = 110\text{ }^{\circ}\text{C}$                                                                     | $I_{F(AV)}$     | 2.0           |     |     |     |     |     |      | A                    |
| Peak Forward Surge Current<br>8.3ms Single half sine wave Superimposed<br>on rated load (JEDEC Method) $T_L = 100\text{ }^{\circ}\text{C}$ | $I_{FSM}$       | 60            |     |     |     |     |     |      | A                    |
| Maximum Instantaneous Forward Voltage at $I_F = 2.0\text{ A}$ .                                                                            | $V_F$           | 1.1           |     |     |     |     |     |      | V                    |
| Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$                                                                              | $I_R$           | 5.0           |     |     |     |     |     |      | $\mu\text{A}$        |
| at rated DC Blocking Voltage $T_a = 125\text{ }^{\circ}\text{C}$                                                                           | $I_{R(H)}$      | 200           |     |     |     |     |     |      | $\mu\text{A}$        |
| Typical thermal resistance                                                                                                                 | $R_{\theta JL}$ | 16            |     |     |     |     |     |      | $^{\circ}\text{C/W}$ |
| Typical Junction Capacitance (Note 1)                                                                                                      | $C_J$           | 30            |     |     |     |     |     |      | pF                   |
| Junction Temperature Range                                                                                                                 | $T_J$           | - 55 to + 150 |     |     |     |     |     |      | $^{\circ}\text{C}$   |
| Storage Temperature Range                                                                                                                  | $T_{STG}$       | - 55 to + 150 |     |     |     |     |     |      | $^{\circ}\text{C}$   |

### Notes :

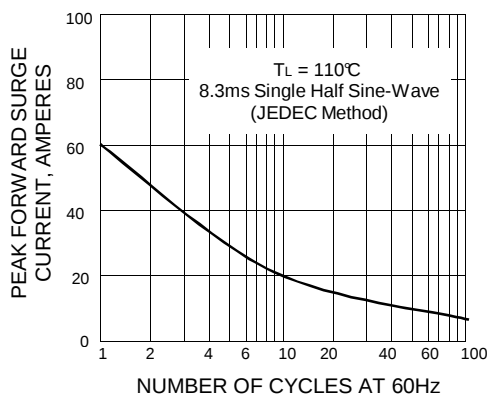
- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC

## RATING AND CHARACTERISTIC CURVES ( S2A - S2M )

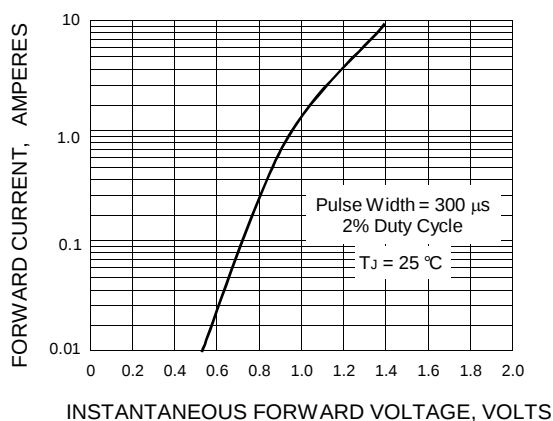
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



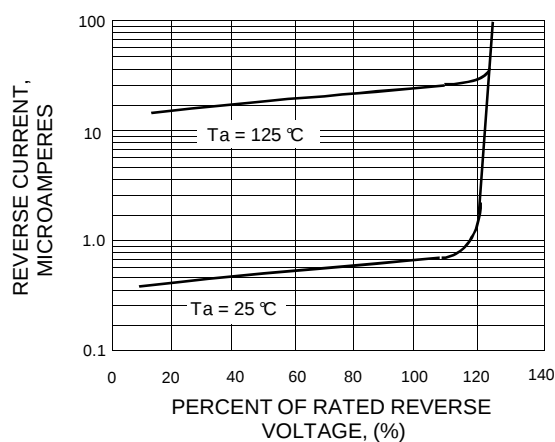
**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 – TYPICAL JUNCTION CAPACITANCE**

