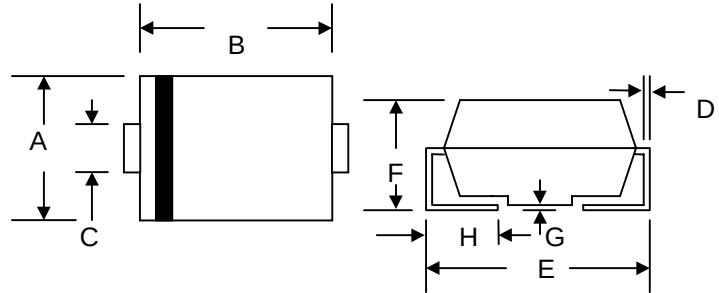


## 1.0A SURFACE MOUNT GLASS PASSIVATED RECTIFIER

### Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop
- Surge Overload Rating to 30A Peak
- Low Power Loss
- Built-in Strain Relief
- Plastic Case Material has UL Flammability Classification Rating 94V-O



### Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.093 grams (approx.)

| SMB/DO-214AA         |       |       |
|----------------------|-------|-------|
| Dim                  | Min   | Max   |
| A                    | 3.30  | 3.94  |
| B                    | 4.06  | 4.70  |
| C                    | 1.91  | 2.11  |
| D                    | 0.152 | 0.305 |
| E                    | 5.08  | 5.59  |
| F                    | 2.13  | 2.44  |
| G                    | 0.051 | 0.203 |
| H                    | 0.76  | 1.27  |
| All Dimensions in mm |       |       |

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

| Characteristic                                                                                                        | Symbol                                                 | S1A         | S1B | S1D | S1G | S1J | S1K | S1M  | Unit |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|-----|-----|-----|-----|-----|------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub><br>V <sub>RWM</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 @T <sub>L</sub> = 100°C                                                              | I <sub>O</sub>                                         | 1.0         |     |     |     |     |     |      | A    |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method) | I <sub>FSM</sub>                                       | 30          |     |     |     |     |     |      | A    |
| Forward Voltage @I <sub>F</sub> = 1.0A                                                                                | V <sub>FM</sub>                                        | 1.10        |     |     |     |     |     |      | V    |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C                   | I <sub>RM</sub>                                        | 5.0<br>200  |     |     |     |     |     |      | μA   |
| Reverse Recovery Time (Note 1)                                                                                        | t <sub>rr</sub>                                        | 2.5         |     |     |     |     |     |      | μS   |
| Typical Junction Capacitance (Note 2)                                                                                 | C <sub>j</sub>                                         | 15          |     |     |     |     |     |      | pF   |
| Typical Thermal Resistance (Note 3)                                                                                   | R <sub>θJL</sub>                                       | 30          |     |     |     |     |     |      | K/W  |
| Operating and Storage Temperature Range                                                                               | T <sub>j</sub> , T <sub>STG</sub>                      | -65 to +175 |     |     |     |     |     |      | °C   |

Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, t<sub>rr</sub> = 0.25A,  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.  
3. Mounted on P.C. Board with 8.0mm<sup>2</sup> land area.

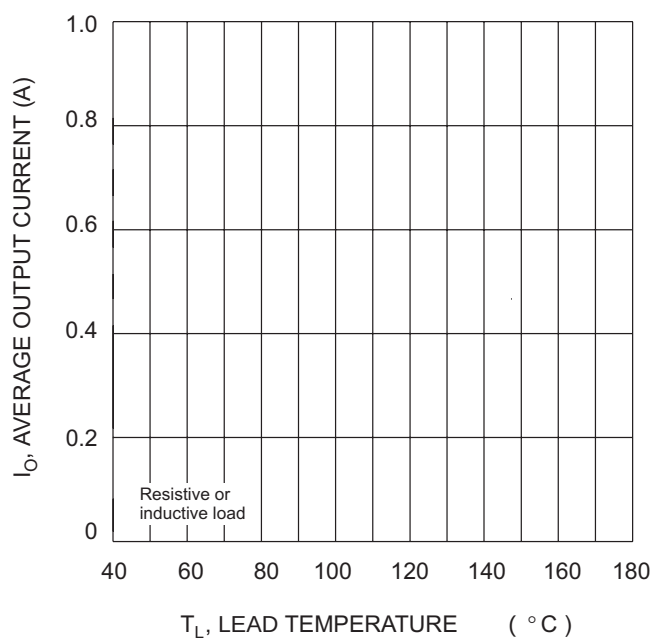


Fig. 1 Forward Current Derating Curve

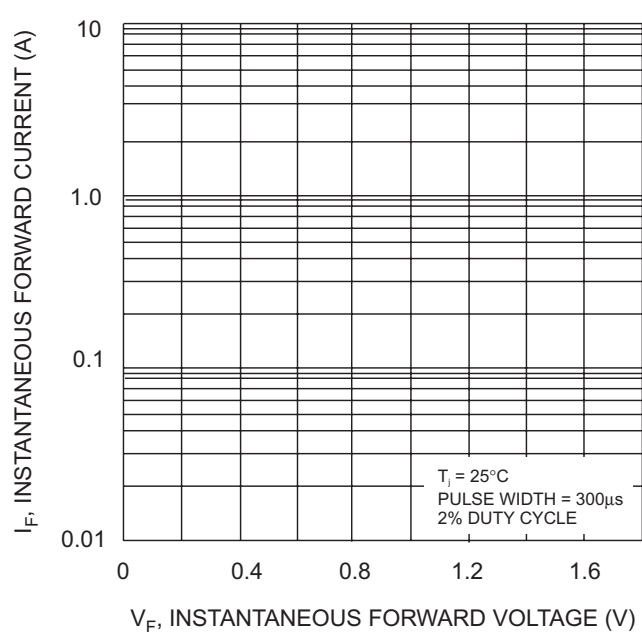


Fig. 2 Typical Forward Characteristics

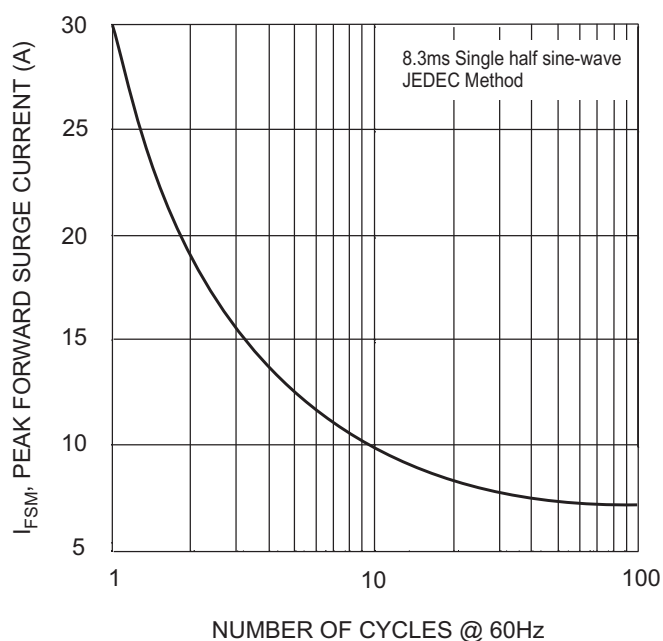


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

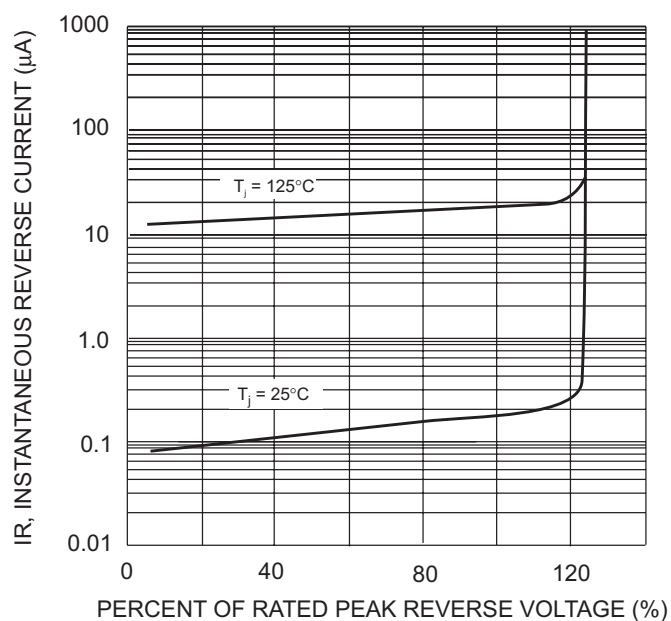


Fig. 4 Typical Reverse Characteristics

## ORDERING INFORMATION

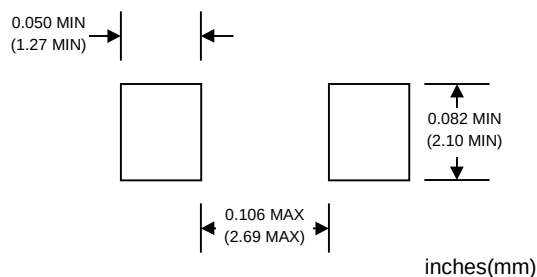
| Product No.◆  | Package Type | Shipping Quantity |
|---------------|--------------|-------------------|
| S1A-T1        | SMB          | 500/Tape & Reel   |
| <b>S1A-T3</b> | SMB          | 3000/Tape & Reel  |
| S1B-T1        | SMB          | 500/Tape & Reel   |
| <b>S1B-T3</b> | SMB          | 3000/Tape & Reel  |
| S1D-T1        | SMB          | 500/Tape & Reel   |
| <b>S1D-T3</b> | SMB          | 3000/Tape & Reel  |
| S1G-T1        | SMB          | 500/Tape & Reel   |
| <b>S1G-T3</b> | SMB          | 3000/Tape & Reel  |
| S1J-T1        | SMB          | 500/Tape & Reel   |
| <b>S1J-T3</b> | SMB          | 3000/Tape & Reel  |
| S1K-T1        | SMB          | 500/Tape & Reel   |
| <b>S1K-T3</b> | SMB          | 3000/Tape & Reel  |
| S1M-T1        | SMB          | 500/Tape & Reel   |
| <b>S1M-T3</b> | SMB          | 3000/Tape & Reel  |

Products listed in **bold** are WTE **Preferred** devices.

◆T1 suffix refers to a 7" reel. T3 suffix refers to a 13" reel.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

## RECOMMENDED FOOTPRINT



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