



## S3A ~ S3M



### 3.0A Surface Mount Glass Passivated Standard Diode

#### FEATURE

- ◆ Glass Passivated Die Construction
- ◆ Ideally Suited for Automatic Assembly
- ◆ Low Forward Voltage Drop
- ◆ Surge Overload Rating to 100A Peak
- ◆ Low Power Loss
- ◆ Built-in Strain Relief
- ◆ Plastic Case Material has UL Flammability Classification Rating 94V-O

#### MECHANICAL DATA

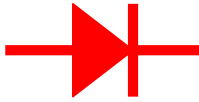
- ◆ Case: SMC/DO-214AB, Molded Plastic.
- ◆ Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- ◆ Polarity: Cathode Band or Cathode Notch
- ◆ Marking: Type Number
- ◆ Weight: 0.21 grams (approx)\_
- ◆ Lead Free: For RoHS / Lead free Version, Add "LF" suffix to part Number, See page 3.

| SMC/DO-214AB         |       |       |
|----------------------|-------|-------|
| Dim.                 | Min.  | Max.  |
| A                    | 5.59  | 6.22  |
| B                    | 6.60  | 7.11  |
| C                    | 2.75  | 3.25  |
| D                    | 0.152 | 0.305 |
| E                    | 7.75  | 8.13  |
| F                    | 2.00  | 2.62  |
| G                    | 0.051 | 0.203 |
| H                    | 0.76  | 1.27  |
| All Dimensions in mm |       |       |

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS @TA = 25°C unless otherwise specified

| Characteristic                                                                                                         | Symbol   | S3A         | S3B | S3D | S3G | S3J | S3K | S3M  | Unit |
|------------------------------------------------------------------------------------------------------------------------|----------|-------------|-----|-----|-----|-----|-----|------|------|
| Peak Repetitive Reverse Voltage                                                                                        | VRRM     |             |     |     |     |     |     |      |      |
| Working Peak Reverse Voltage                                                                                           | VRWM     | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | V    |
| DC Blocking Voltage                                                                                                    | VR       |             |     |     |     |     |     |      |      |
| RMS Reverse Voltage                                                                                                    | VR(RMS)  | 35          | 70  | 140 | 280 | 420 | 560 | 700  | V    |
| Average Rectified Output Current @TL=100°C                                                                             | IO       | 3.0         |     |     |     |     |     |      | A    |
| Non-Repetitive Peak Forward Surtge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method) | IFSM     | 100         |     |     |     |     |     |      | A    |
| Forward Voltage @IF=2.0A                                                                                               | VFM      | 1.20        |     |     |     |     |     |      | V    |
| Peak Reverse Current @TA=25°C                                                                                          | IRM      | 5.0         |     |     |     |     |     |      | uA   |
| At Rated DC Blocking Voltage @TA=125°C                                                                                 |          | 250         |     |     |     |     |     |      |      |
| Reverse Recovery Time (Note 1)                                                                                         | Trr      | 2.5         |     |     |     |     |     |      | uS   |
| Typical Junction Capacitance ( Note 2)                                                                                 | Ci       | 60          |     |     |     |     |     |      | pF   |
| Typical Thermal Resistance ( Note 3)                                                                                   | RθJL     | 13          |     |     |     |     |     |      | °C/W |
| Operating and Storage Temperature Range                                                                                | TJ, TSTG | -55 to +150 |     |     |     |     |     |      | °C   |

- Note:** 1). Measured with IF = 0.5A, IR=1.0A, Irr = 0.25A  
 2). Measured at 1.0MHz and applied reverse voltage of 4.0V DC  
 3). Mounted on P.C. Board with 8.0mm² land area.



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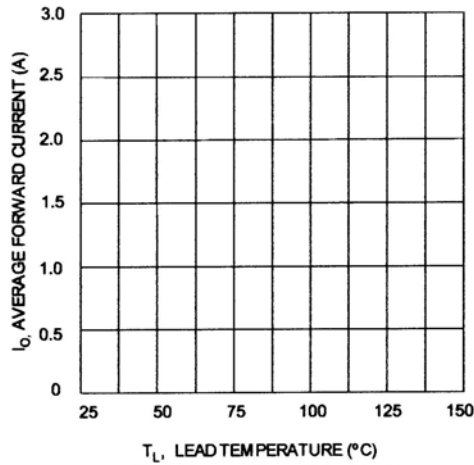


Fig. 1 Forward Current Derating Curve

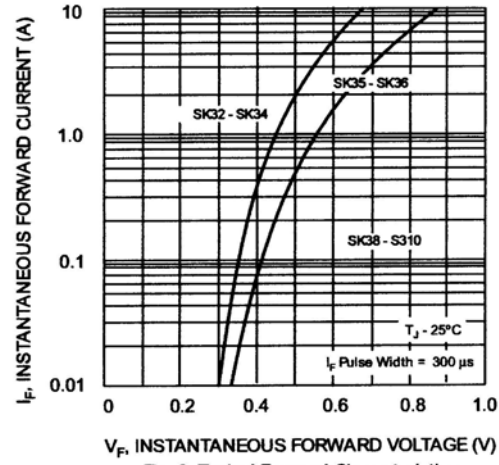


Fig. 2 Typical Forward Characteristics

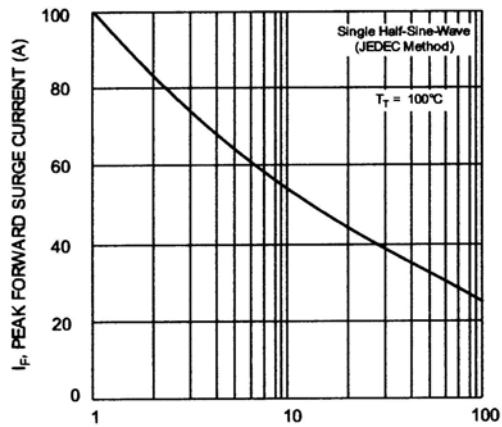


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

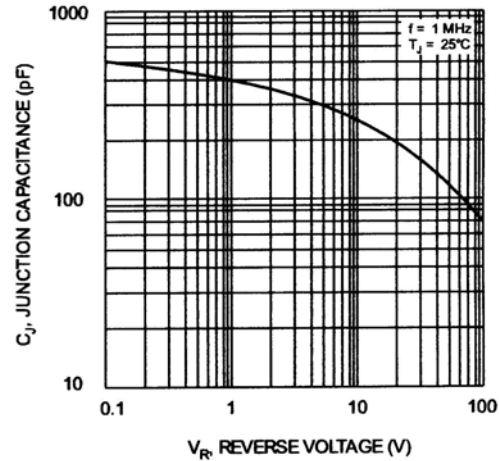


Fig. 4 Typical Junction Capacitance

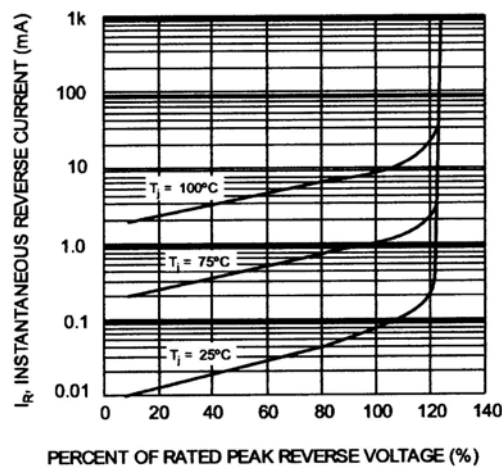


Fig. 5 Typical Reverse Characteristics

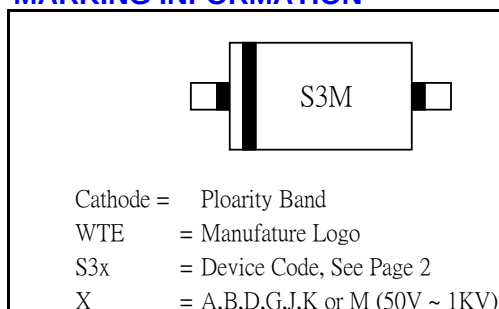


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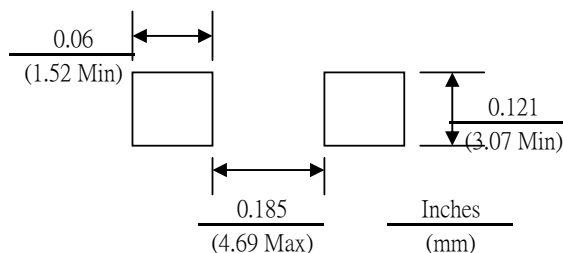


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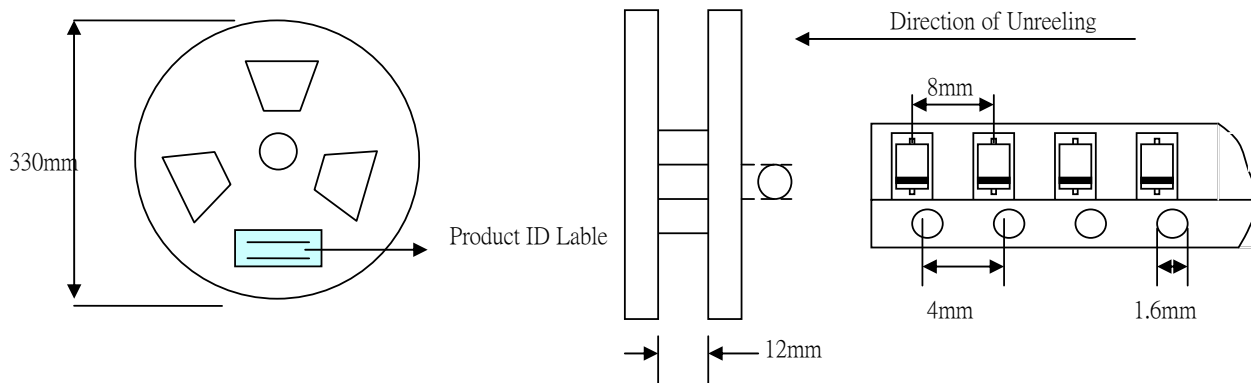
#### MARKING INFORMATION



#### RECOMMENDED FOOTPRINT



#### MARKING INFORMATION



| Reel Diameter<br>(mm) | Quantity<br>(PCS) | Inner box Size<br>LxWxH (mm) | Quantity<br>(PCS) | Carton Size<br>LxWxH (mm) | Quantity<br>(PCS) | Approx Gross Weight<br>(KG) |
|-----------------------|-------------------|------------------------------|-------------------|---------------------------|-------------------|-----------------------------|
| 330                   | 3000              | 340x337x45                   | 6000              | 370x370x420               | 48000             | 19.0                        |

- Note: 1). Paper reel, white or gray color.  
2). Components are packed in accordance with EIA standard 481-1 and 481-2.

#### ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| S3A-T3      | SMC          | 3000/Tape & Reel  |
| S3B-T3      | SMC          | 3000/Tape & Reel  |
| S3D-T3      | SMC          | 3000/Tape & Reel  |
| S3G-T3      | SMC          | 3000/Tape & Reel  |
| S3J-T3      | SMC          | 3000/Tape & Reel  |
| S3K-T3      | SMC          | 3000/Tape & Reel  |
| S3M-T3      | SMC          | 3000/Tape & Reel  |

- 1). Shipping quantity given in minimum packing quantity only, for minimum order quantity, please consult the Sales Department.  
2). To order RoHS /Lead Free version ( with Lead Free finish), add "LF" suffix to part number above, for example, S3A-T3-LF.