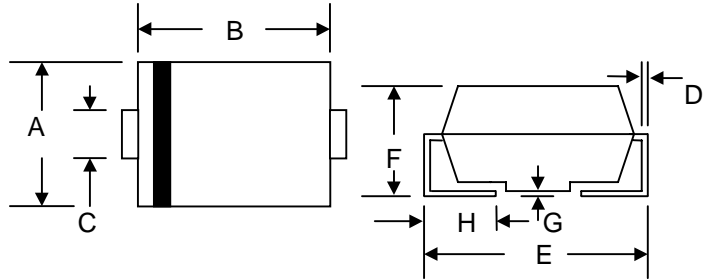


## 5.0A SURFACE MOUNT GLASS PASSIVATED STANDARD DIODE

### Features

- 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

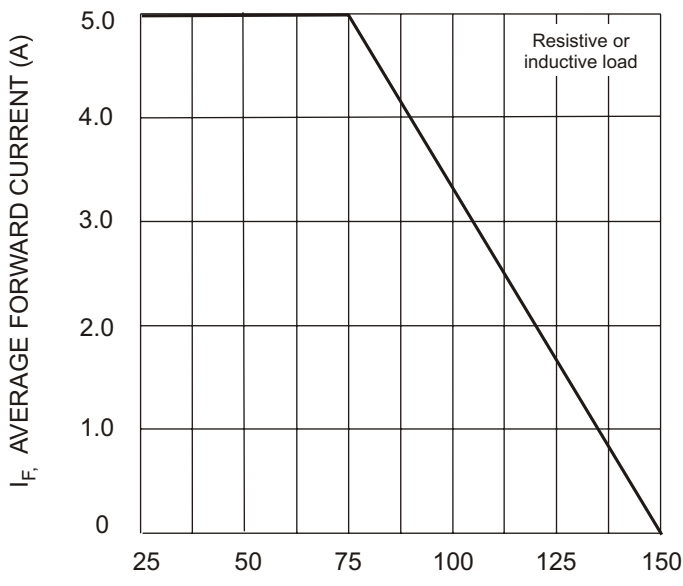
- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**

| 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 |       |       |

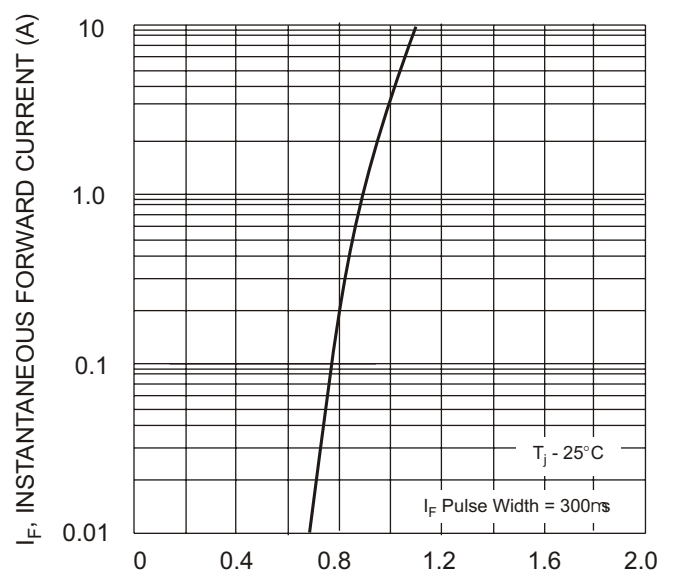
### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic                                                                                                     | Symbol          | S5A         | S5B | S5D | S5G | S5J | S5K | S5M  | Unit               |
|--------------------------------------------------------------------------------------------------------------------|-----------------|-------------|-----|-----|-----|-----|-----|------|--------------------|
| Peak Repetitive Reverse Voltage                                                                                    | $V_{RRM}$       |             |     |     |     |     |     |      |                    |
| Working Peak Reverse Voltage                                                                                       | $V_{RWM}$       | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | V                  |
| DC Blocking Voltage                                                                                                | $V_R$           |             |     |     |     |     |     |      |                    |
| RMS Reverse Voltage                                                                                                | $V_{R(RMS)}$    | 35          | 70  | 140 | 280 | 420 | 560 | 700  | V                  |
| Average Rectified Output Current @ $T_L = 75^\circ\text{C}$                                                        | $I_O$           | 5.0         |     |     |     |     |     |      | A                  |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 100         |     |     |     |     |     |      | A                  |
| Forward Voltage @ $I_F = 5.0\text{A}$                                                                              | $V_{FM}$        | 1.15        |     |     |     |     |     |      | V                  |
| Peak Reverse Current @ $T_A = 25^\circ\text{C}$<br>At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$        | $I_{RM}$        | 10<br>250   |     |     |     |     |     |      | $\mu\text{A}$      |
| Typical Junction Capacitance (Note 1)                                                                              | $C_j$           | 40          |     |     |     |     |     |      | pF                 |
| Typical Thermal Resistance (Note 2)                                                                                | $R_{\theta JL}$ | 10          |     |     |     |     |     |      | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range                                                                            | $T_j, T_{STG}$  | -65 to +150 |     |     |     |     |     |      | $^\circ\text{C}$   |

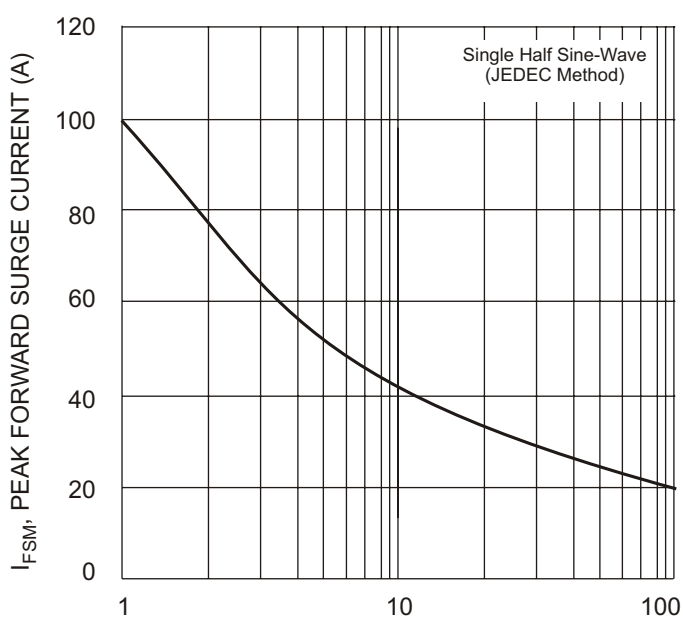
Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.  
2. Mounted on P.C. Board with 8.0mm<sup>2</sup> land area.



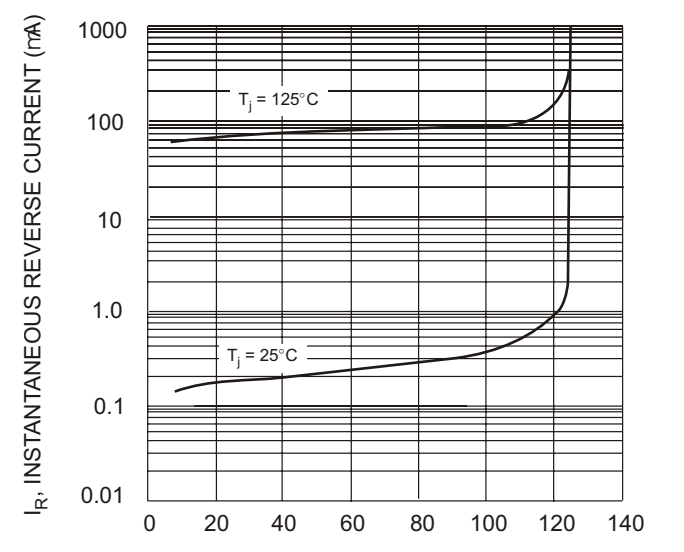
$T_T$ , TERMINAL TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



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



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



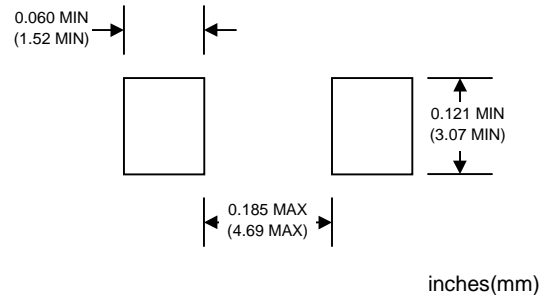
PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 4 Typical Reverse Characteristics

## MARKING INFORMATION



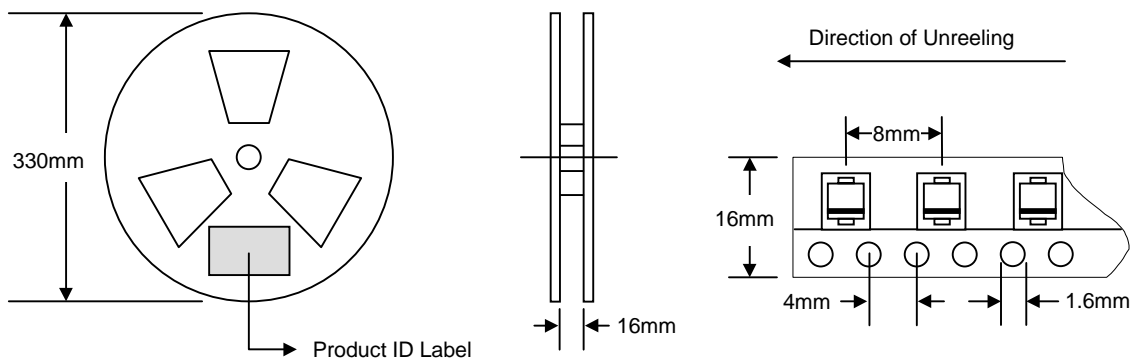
Cathode = Polarity Band  
 WTE = Manufacturer's Logo  
 S5x = Device Number  
 x = A, B, D, G, J, K or M

## RECOMMENDED FOOTPRINT



## PACKAGING INFORMATION

### TAPE & REEL



| Reel Diameter (mm) | Quantity (PCS) | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|--------------------|----------------|-------------------------------|----------------|----------------------------|----------------|---------------------------|
| 330                | 3,000          | 340 x 337 x 45                | 6,000          | 370 x 370 x 420            | 48,000         | 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 |
|-------------|--------------|-------------------|
| S5A-T3      | SMC          | 3000/Tape & Reel  |
| S5B-T3      | SMC          | 3000/Tape & Reel  |
| S5D-T3      | SMC          | 3000/Tape & Reel  |
| S5G-T3      | SMC          | 3000/Tape & Reel  |
| S5J-T3      | SMC          | 3000/Tape & Reel  |
| S5K-T3      | SMC          | 3000/Tape & Reel  |
| S5M-T3      | SMC          | 3000/Tape & Reel  |

1. Shipping quantity given is for 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, S5A-T3-LF.**

Won-Top Electronics Co., Ltd (WTE) has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

**Won-Top Electronics Co., Ltd.**

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, Taiwan

**Phone:** 886-7-822-5408 or 886-7-822-5410

**Fax:** 886-7-822-5417

**Email:** sales@wontop.com

**Internet:** <http://www.wontop.com>

*We power your everyday.*