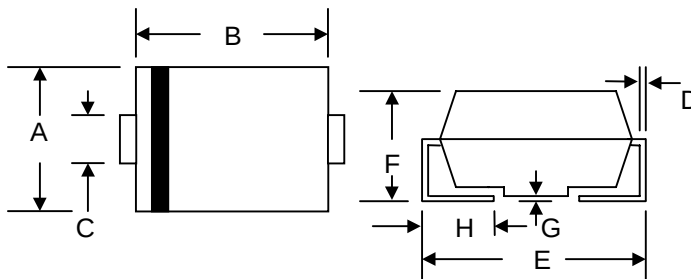


## 1.0A SURFACE MOUNT SCHOTTKY BARRIER DIODE

### Features

- Schottky Barrier Chip
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 30A Peak
- For Use in Low Voltage Application
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V-O



### Mechanical Data

- Case: SMB/DO-214AA, 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.)
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**

| 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                                                 | SK12        | SK13 | SK14 | SK15 | SK16 | SK18 | SK19 | S110 | 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> | 20          | 30   | 40   | 50   | 60   | 80   | 90   | 100  | V    |
| RMS Reverse Voltage                                                                                                   | V <sub>R(RMS)</sub>                                    | 14          | 21   | 28   | 35   | 42   | 56   | 64   | 71   | V    |
| Average Rectified Output Current @T <sub>L</sub> = 75°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>                                        | 0.50        |      |      | 0.70 |      | 0.85 |      |      | V    |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C                   | I <sub>RM</sub>                                        | 0.5<br>20   |      |      |      |      |      |      |      | mA   |
| Typical Thermal Resistance (Note 1)                                                                                   | R <sub>θJL</sub><br>R <sub>θJA</sub>                   | 30<br>95    |      |      |      |      |      |      |      | °C/W |
| Operating Temperature Range                                                                                           | T <sub>j</sub>                                         | -65 to +125 |      |      |      |      |      |      |      | °C   |
| Storage Temperature Range                                                                                             | T <sub>STG</sub>                                       | -65 to +150 |      |      |      |      |      |      |      | °C   |

Note: 1. Mounted on P.C. Board with 5.0mm<sup>2</sup> copper pad area.

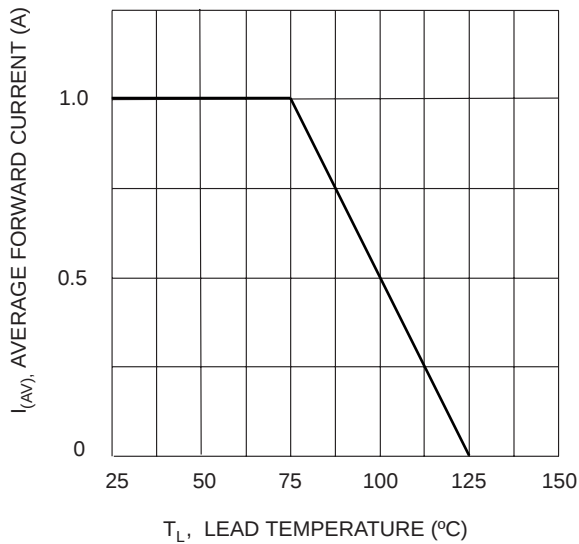


Fig. 1 Forward Current Derating Curve

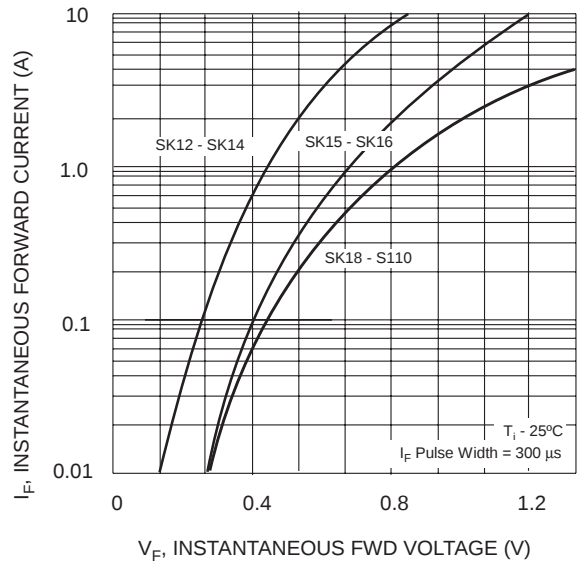


Fig. 2 Typ. Forward Characteristics

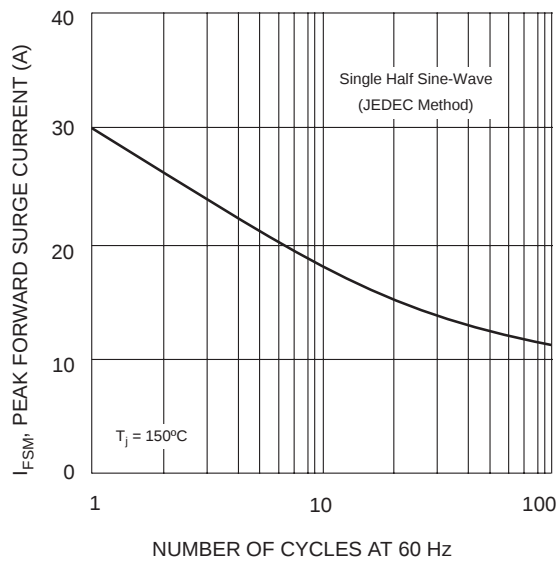


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

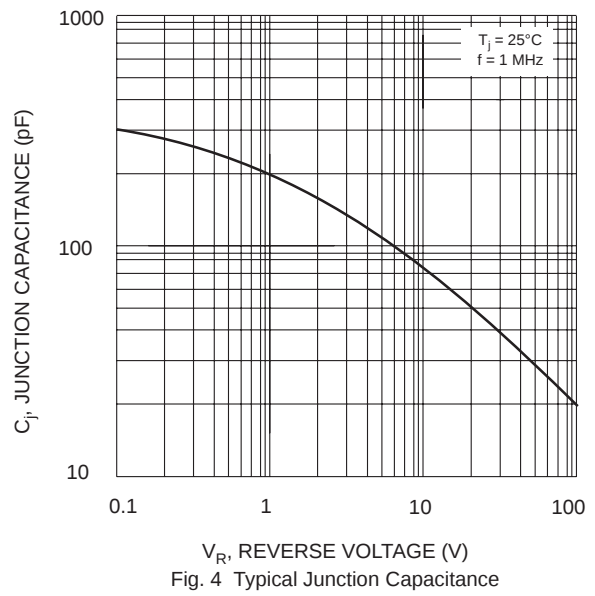


Fig. 4 Typical Junction Capacitance

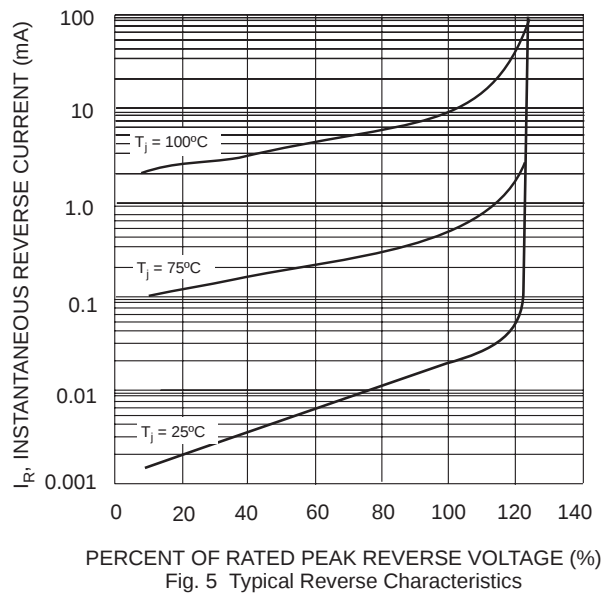


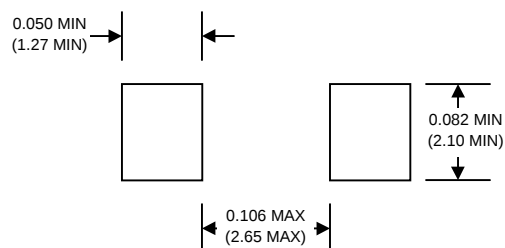
Fig. 5 Typical Reverse Characteristics

## MARKING INFORMATION



Cathode = Polarity Band  
 WTE = Manufacturer's Logo  
 SK1x = Device Number Except S110  
 x = 2, 3, 4, 5, 6, 8 or 9

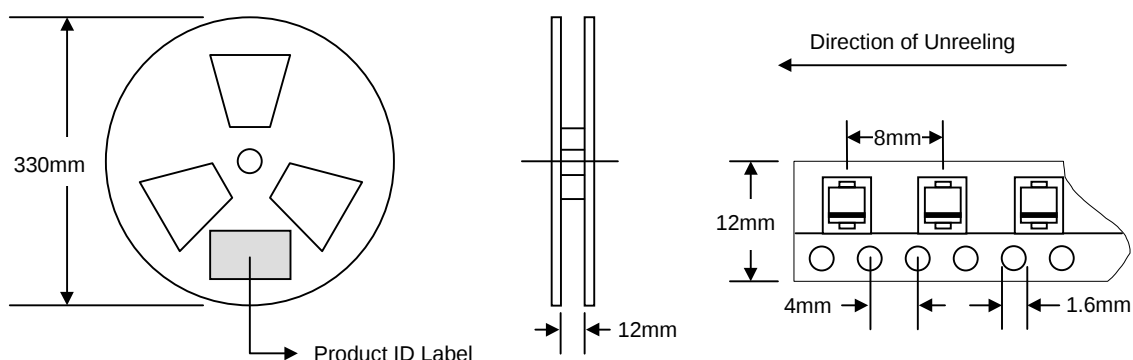
## RECOMMENDED FOOTPRINT



inches(mm)

## 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         | 14.0                      |

**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 |
|-------------|--------------|-------------------|
| SK12-T3     | SMB          | 3000/Tape & Reel  |
| SK13-T3     | SMB          | 3000/Tape & Reel  |
| SK14-T3     | SMB          | 3000/Tape & Reel  |
| SK15-T3     | SMB          | 3000/Tape & Reel  |
| SK16-T3     | SMB          | 3000/Tape & Reel  |
| SK18-T3     | SMB          | 3000/Tape & Reel  |
| SK19-T3     | SMB          | 3000/Tape & Reel  |
| S110-T3     | SMB          | 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, SK12-T3-LF.**

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**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.

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