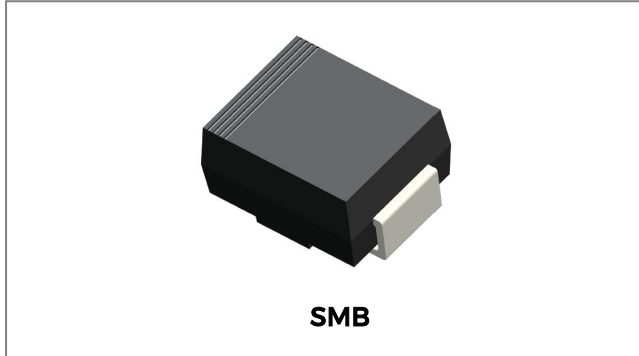


## SK34B SCHOTTKY RECTIFIER



### Features

- Small foot print, surface mountable
- Very low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Green products in compliance the ROHS directive
- Terminals finish: Tin Lead-free plated
- This is a Pb - Free device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

### Maximum Ratings:

| Characteristics                                                                        | Symbol                          | Condition                                          | Max. | Units |
|----------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------------|------|-------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | -                                                  | 40   | V     |
| Average Rectified Forward Current                                                      | $I_{F(AV)}$                     | $T_L=105^{\circ}\text{C}(\text{Note1})$ , In DC    | 3    | A     |
| Peak One Cycle Non-Repetitive Surge Current                                            | $I_{FSM}$                       | 8.3ms, Half Sine pulse, $T_c = 25^{\circ}\text{C}$ | 75   | A     |

Note1: Rectangular wave form, 50% duty cycle,  $T_L$  (Lead Temperature) =  $T_T$  (Terminal Temperature)

### Electrical Characteristics:

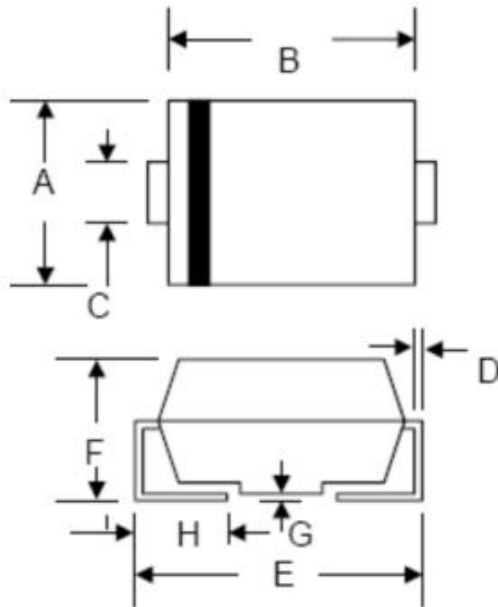
| Characteristics       | Symbol   | Condition                                                                  | Typ.  | Max. | Units |
|-----------------------|----------|----------------------------------------------------------------------------|-------|------|-------|
| Forward Voltage Drop* | $V_{F1}$ | @ 3A, Pulse, $T_J = 25^{\circ}\text{C}$                                    | 0.52  | 0.63 | V     |
|                       | $V_{F2}$ | @ 3A, Pulse, $T_J = 125^{\circ}\text{C}$                                   | 0.47  | 0.57 | V     |
| Reverse Current*      | $I_{R1}$ | @ $V_R$ = rated $V_R$ , $T_J = 25^{\circ}\text{C}$                         | 0.009 | 1.0  | mA    |
|                       | $I_{R2}$ | @ $V_R$ = rated $V_R$ , $T_J = 125^{\circ}\text{C}$                        | 4.4   | 20   | mA    |
| Junction Capacitance  | $C_T$    | @ $V_R = 5\text{V}$ , $T_c = 25^{\circ}\text{C}$ , $f_{SIG} = 1\text{MHz}$ | 142   | 170  | pF    |

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

## Thermal-Mechanical Specifications:

| Characteristics                             | Symbol          | Condition    | Specification | Units |
|---------------------------------------------|-----------------|--------------|---------------|-------|
| Junction Temperature                        | $T_J$           | -            | -55 to +150   | °C    |
| Storage Temperature                         | $T_{stg}$       | -            | -55 to +150   | °C    |
| Typical Thermal Resistance Junction to Lead | $R_{\theta JL}$ | DC operation | 25            | °C/W  |
| Approximate Weight                          | wt              | -            | 0.09          | g     |

## Mechanical Dimensions SMB



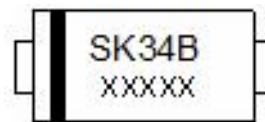
| SYMBOL | Millimeters |       | Inches |       |
|--------|-------------|-------|--------|-------|
|        | Min.        | Max.  | Min.   | Max.  |
| A      | 3.30        | 3.94  | 0.130  | 0.155 |
| B      | 4.06        | 4.70  | 0.160  | 0.185 |
| C      | 1.80        | 2.20  | 0.071  | 0.087 |
| D      | 0.152       | 0.305 | 0.006  | 0.012 |
| E      | 4.80        | 5.59  | 0.189  | 0.220 |
| F      | 2.10        | 2.60  | 0.083  | 0.102 |
| G      | 0.051       | 0.203 | 0.002  | 0.008 |
| H      | 0.76        | 1.52  | 0.030  | 0.060 |

## Ordering Information

| Device   | Package | Shipping               |
|----------|---------|------------------------|
| SK34B    | SMB     | 3000pcs / reel         |
| SK34BTR  | SMB     | 3000pcs / reel         |
| SK34BTR2 | SMB     | 3000pcs / Plastic reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram

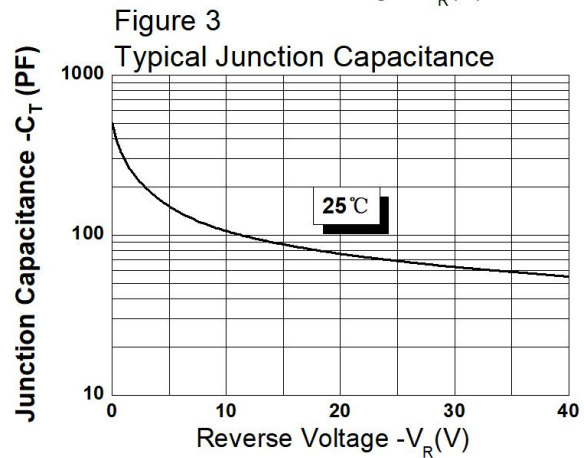
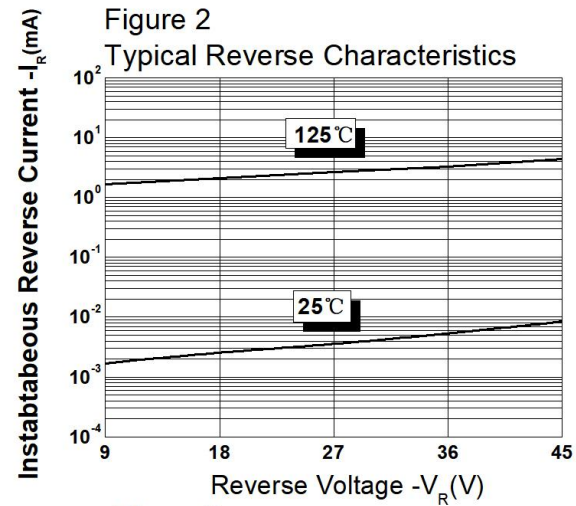
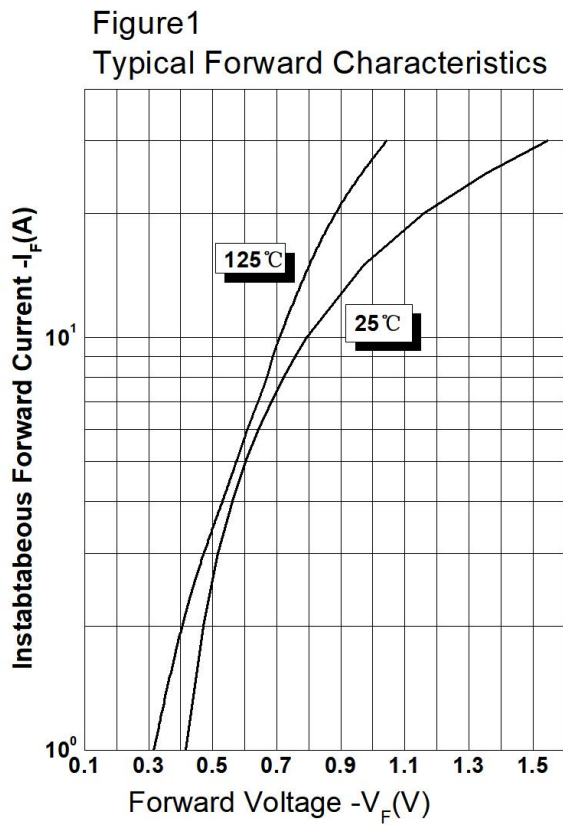
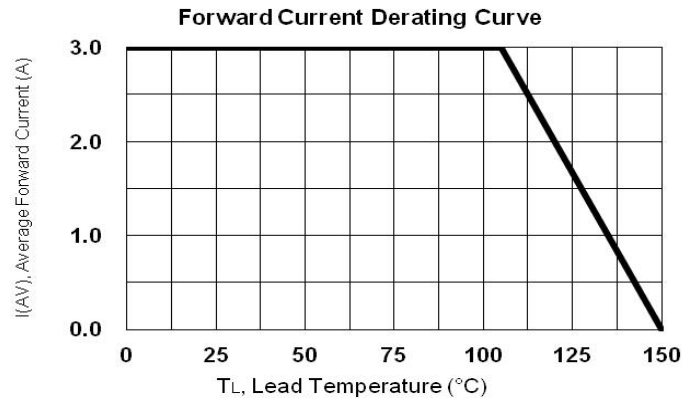


Where XXXXX is YYWWL

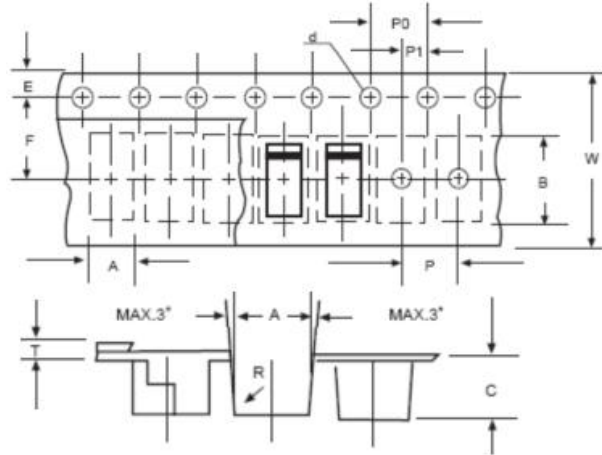
SK = Device Type  
3 = Forward Current (3A)  
4 = Reverse Voltage (40V)  
B = Package type  
YY = Year  
WW = Week  
L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL94V-0

## Ratings and Characteristics Curves



## Carrier Tape Specification SMB



| SYMBOL | Millimeters |       |
|--------|-------------|-------|
|        | Min.        | Max.  |
| A      | 2.97        | 3.17  |
| B      | 5.70        | 5.90  |
| C      | 2.32        | 2.52  |
| d      | 1.40        | 1.60  |
| E      | 1.40        | 1.60  |
| F      | 5.60        | 5.70  |
| P      | 3.90        | 4.10  |
| P0     | 3.90        | 4.10  |
| P1     | 1.90        | 2.10  |
| T      | 0.25        | 0.35  |
| W      | 11.80       | 12.20 |

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