Technical Data
Data Sheet N0936, Rev. A

# SK36B SCHOTTKY RECTIFIER



SMB

## 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
- 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>$V_R$ | - | 60 | V |
| Average Rectified Forward Current | $I_{F\ (AV)}$ | 50% duty cycle @$T_C$=100°C, rectangular wave form | 3 | A |
| Peak One Cycle Non-Repetitive Surge Current | $I_{FSM}$ | 8.3ms, Half Sine pulse, $T_c$ = 25 °C | 80 | A |

## Electrical Characteristics:

| Characteristics | Symbol | Condition | Typ. | Max. | Units |
|---|---|---|---|---|---|
| Forward Voltage Drop* | $V_{F1}$ | @ 3A, Pulse, $T_J$ = 25 °C | 0.58 | 0.74 | V |
| Reverse Current* | $I_{R1}$ | @$V_R$ = rated $V_R$, $T_J$ = 25 °C | 0.01 | 0.5 | mA |
| | $I_{R2}$ | @$V_R$ = rated $V_R$, $T_J$ = 125 °C | - | 20 | mA |
| Junction Capacitance | $C_T$ | @$V_R$ = 5V, $T_C$ = 25 °C, $f_{SIG}$ = 1MHz | 100 | 250 | pF |
| Series Inductance | $L_S$ | Measured lead to lead 5 mm from package body | 8.0 | - | nH |
| Voltage Rate of Change | dv/dt | - | - | 10,000 | V/µs |

* Pulse width < 300 µs, duty cycle < 2%

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RoHS

## 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 Case | $R_{\theta JC}$ | DC operation | 8 | ℃/W |
| Approximate Weight | wt | - | 0.09 | g |

## Ratings and Characteristics Curves

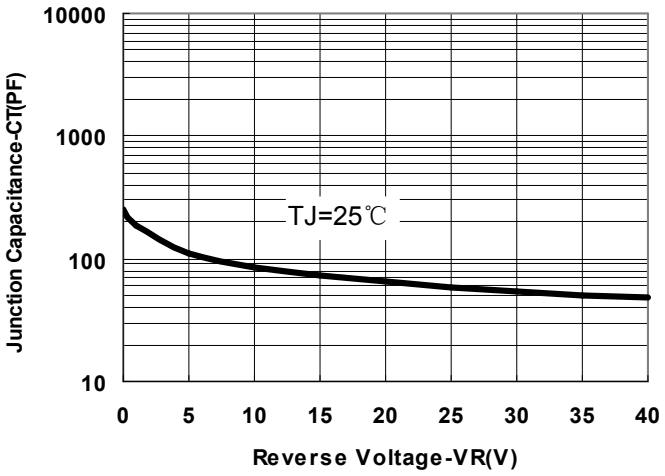



Fig.1-Typical Junction Capacitance

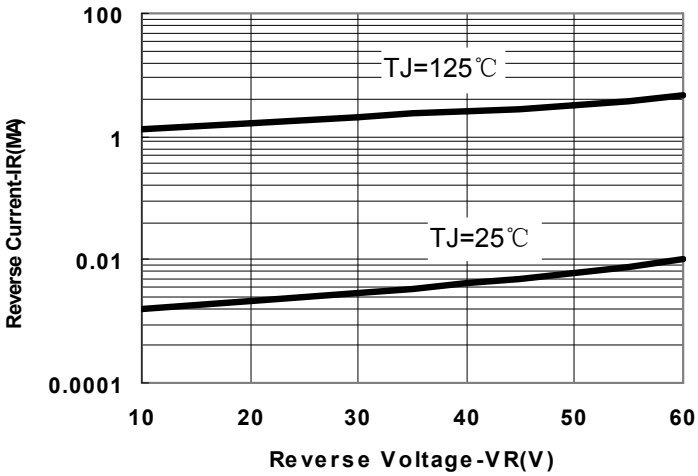



Fig.2-Typical Values Of Reverse Current

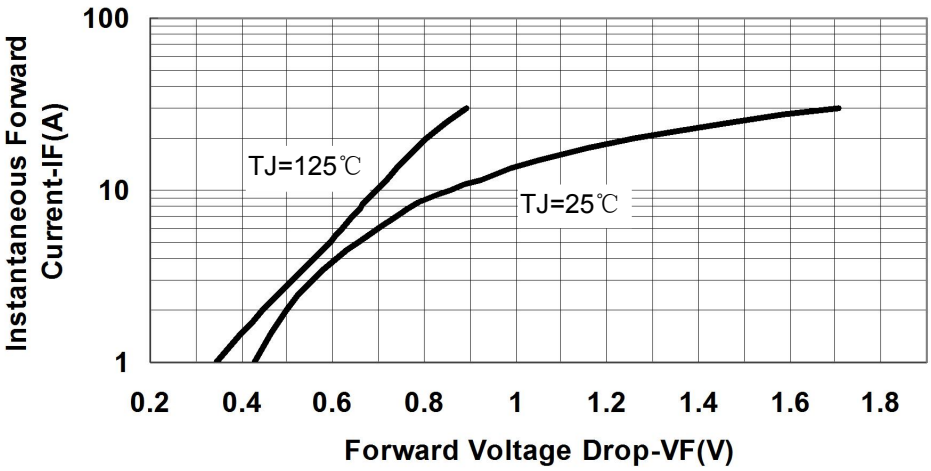


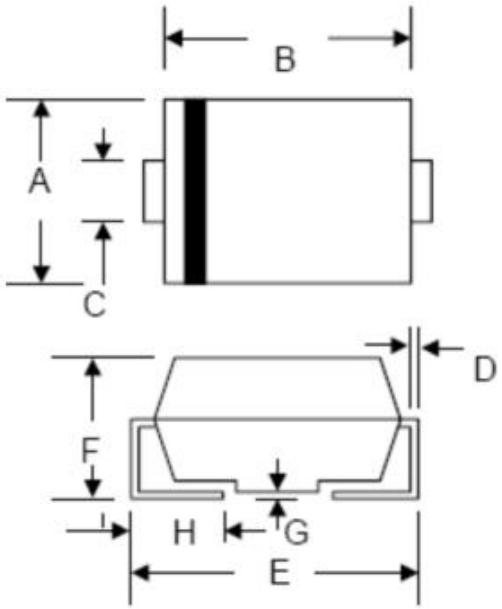

Fig.3-Typical Forward Voltage Drop Characteristics

# SK36B

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RoHS

## 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 |
|---|---|---|
| SK36B | SMB | 3000pcs / 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

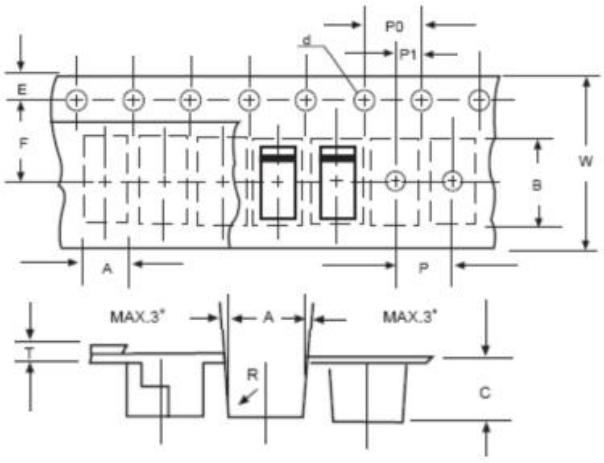



Where XXXXX is YYWWL

| | |
|---|---|
| SK | = Device Type |
| 3 | = Forward Current (3A) |
| 6 | = Reverse Voltage (60V) |
| B | = Package type |
| YY | = Year |
| WW | = Week |
| L | = Lot Number |

**Cautions:** Molding resin
Epoxy resin UL:94V-0

## 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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