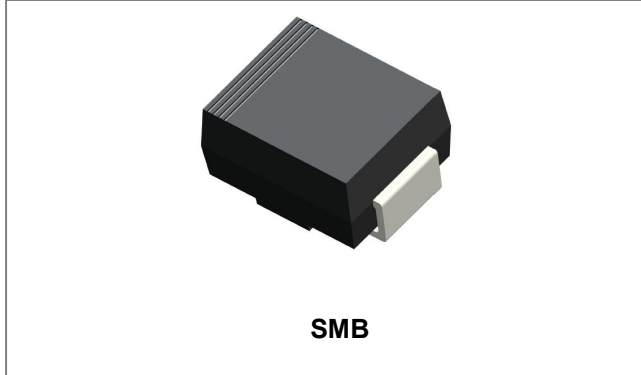


SK22 THRU SK210 SCHOTTKY RECTIFIER



Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- 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



Mechanical Data

- Case: Low Profile Molded plastic
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band or cathode Notch
- Mounting Position: Any
- Weight: 0.09grams(approx)

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

| Characteristic | Symbol | SK22 | SK23 | SK24 | SK25 | SK26 | SK28 | SK29 | SK210 | Units |
|---|------------------|-------------|------|------|------|------|------|------|-------|-------|
| Peak Repetitive Reverse Voltage | V _{RRM} | | | | | | | | | |
| Working Peak Reverse Voltage | V _{RWM} | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | V |
| DC Blocking Voltage | V _R | | | | | | | | | |
| Maximum RMS voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 64 | 71 | V |
| Average Rectified Output Current @T _L = 105°C | I _O | 2.0 | | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 50 | | | | | | | | A |
| Forward Voltage* @ I _O = 2.0 A | V _F | 0.55 | | 0.70 | | 0.85 | | | V | |
| Peak Reverse Current* @T _A = 25°C At Rated DC Blocking Voltage @T _A = 100°C | I _{RM} | 0.5 | | | | 20 | | | | mA |
| Typical Thermal Resistance Junction to Ambient (Note 1) | R _{θJA} | 75 | | | | | | | | K/W |
| Operating Temperature Range | T _J | -65 to +125 | | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -65 to +150 | | | | | | | | °C |

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

Note: 1. mounted on P.C. Board with 8.0mm² copper pad areas.

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Ratings and Characteristics Curves

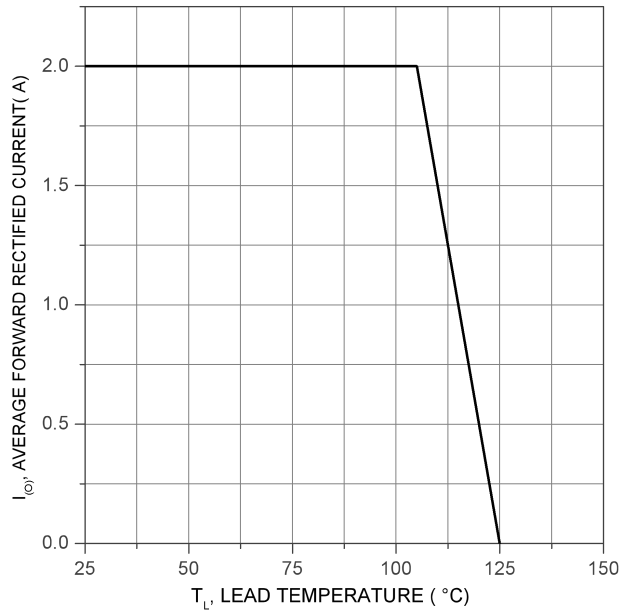


Fig.1 Forward Current Derating Curve

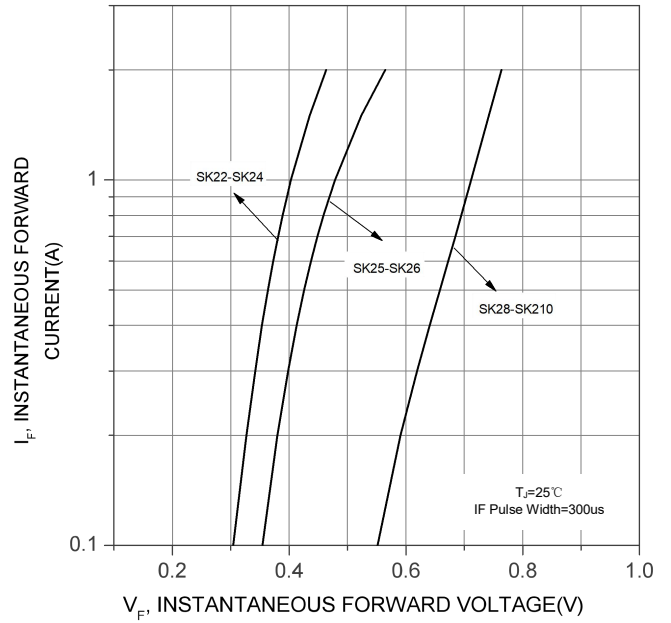


Fig.2 Typical Forward Characteristics

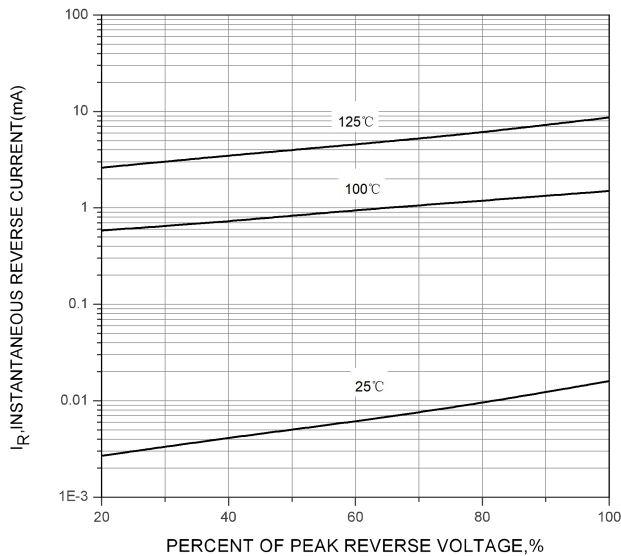


Fig.3 Typical Reverse Characteristics

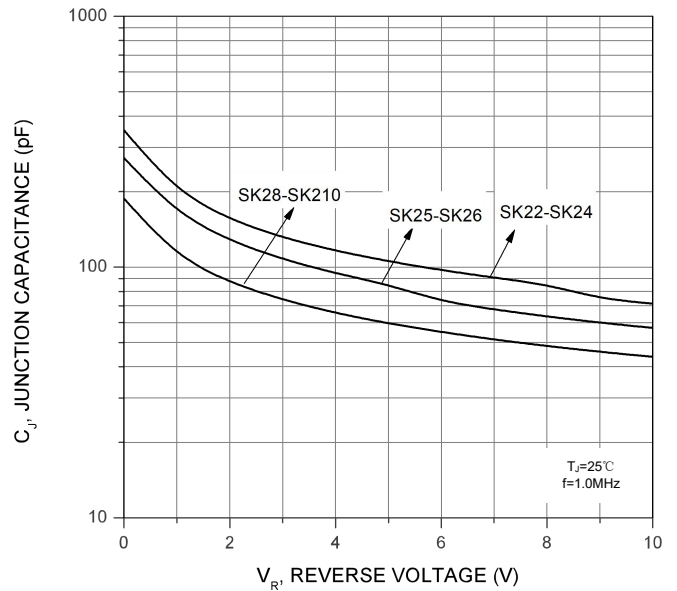
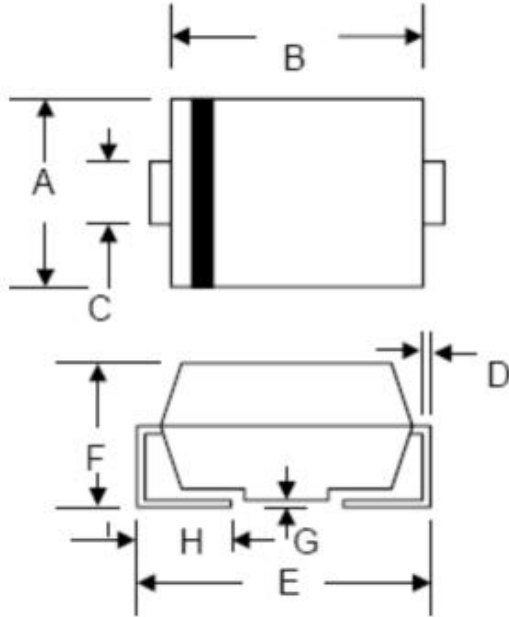


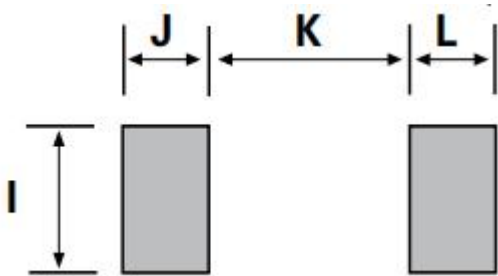
Fig.4 Typical Junction Capacitance

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 |

Soldering Pad Layout (Millimeters)



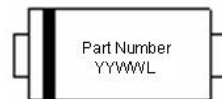
| SYMBOL | MIN. | MAX. |
|--------|------|------|
| I | 1.85 | 2.15 |
| J | 0.8 | 1.5 |
| K | 3.55 | 4.75 |
| L | 0.8 | 1.5 |

Ordering Information

| Device | Package | Shipping |
|-----------------------|---------------|----------------|
| SK22 THRU SK210 | SMB (Pb-Free) | 3000pcs / reel |

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

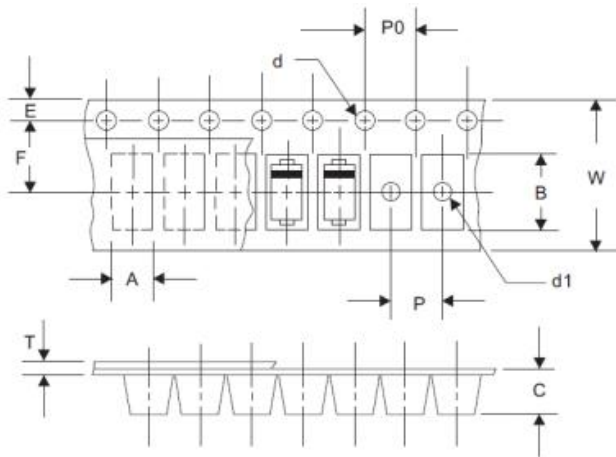
Marking Diagram



Where XXXXX is YYWWL

First row: Part Number (SK22, SK23, SK24, SK25, SK26, SK28, SK29, SK210)
Second row: YYWWL
YY is the manufacture year,
WW is the manufacture week code,
L is the wafer's Lot Number

Carrier Tape Specification SMB



| SYMBOL | Millimeters | |
|--------|-------------|-------|
| | Min. | Max. |
| A | 3.70 | 3.90 |
| 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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