

SK52B THRU SK5AB

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 V

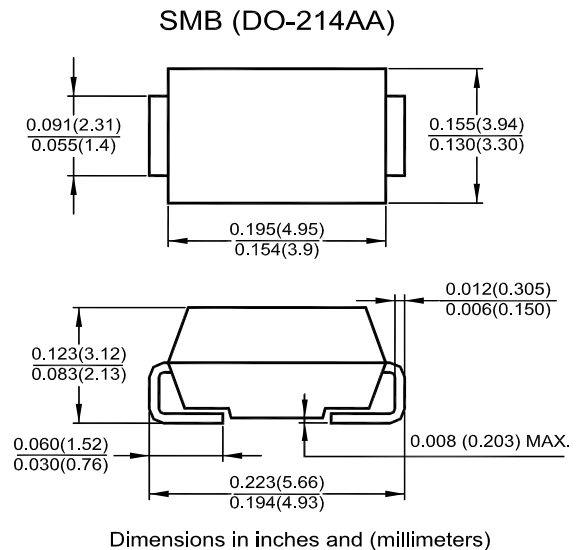
Forward Current - 5 A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- For surface mount applications
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- Low profile package
- Built-in strain relief, ideal for automated placement
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

Mechanical Data

- **Case:** JEDEC SMB (DO-214AA) molded plastic body
- **Terminals:** solder plated, solderable per MIL-STD-750, method 2026
- **Polarity:** color band denotes cathode end



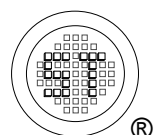
Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, resistive or inductive load. For capacitive load, derate by 20 %.

| Parameter | Symbols | SK52B | SK53B | SK54B | SK55B | SK56B | SK58B | SK5AB | Units |
|---|-----------------------------------|---------------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 57 | 71 | V |
| Maximum DC Blocking Voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum Average Forward Rectified Current 0.375" (9.5 mm) Lead Length | I _{F(AV)} | 5 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC method) | I _{FSM} | 150 | | | | | | | A |
| Maximum Forward Voltage at 5 A ¹⁾ | V _F | 0.55 | | | 0.75 | | 0.85 | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage T _a = 25 °C T _a = 100 °C | I _R | 0.5 | | | | | | | mA |
| | | 20 | | | | | | | |
| Typical Thermal Resistance ²⁾ | R _{θJA} | 55 | | | | | | | °C/W |
| | R _{θJL} | 17 | | | | | | | |
| Operating and Storage Temperature Range | T _j , T _{stg} | - 55 to + 150 | | | | | | | °C |

¹⁾ Pulse test: 300 μs pulse width, 1% duty cycle

²⁾ P.C.B mounted 0.55 X 0.55" (14 X 14 mm) copper pad areas



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FIG.1-FORWARD CURRENT DERATING CURVE

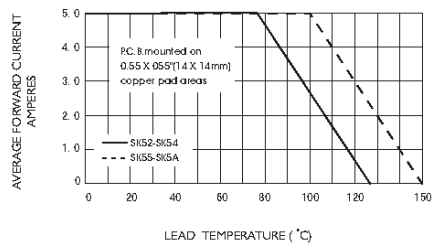


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

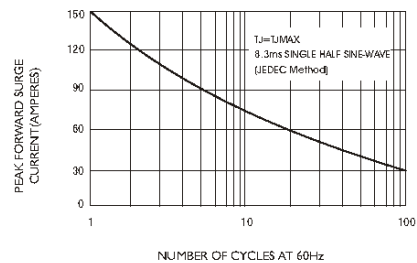


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

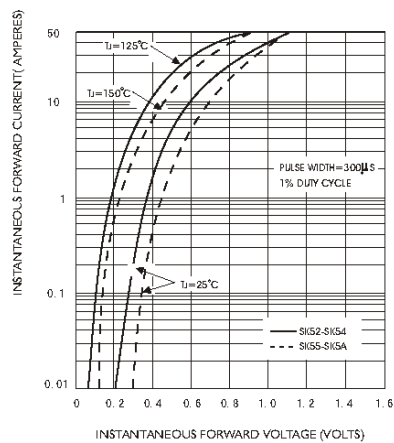


FIG.4-TYPICAL REVERSE CHARACTERISTICS

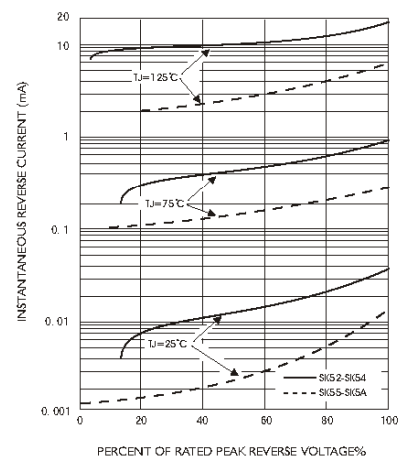


FIG.5-TYPICAL JUNCTION CAPACITANCE

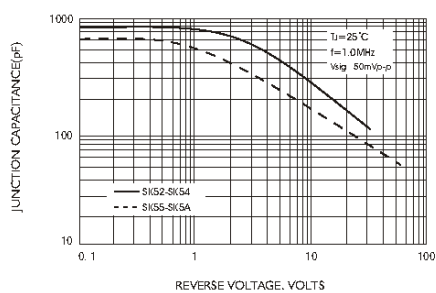


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

