

SK32A THRU SK3AA

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 V

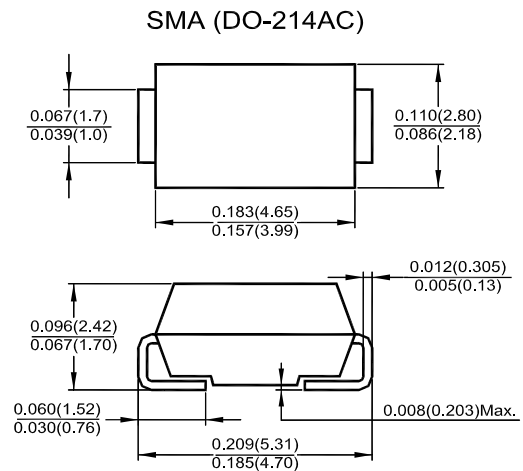
Forward Current - 3 A

Features

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

Mechanical Data

- **Case:** SMA (DO-214AC) molded plastic body
- **Terminals:** solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity:** color band denotes cathode end



Dimensions in inches and (millimeters)

Absolute Maximum Ratings and Characteristics

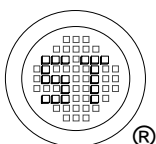
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, resistive or inductive load, For capacitive load, derate by 20%

| Parameter | Symbols | SK32A | SK33A | SK34A | SK35A | SK36A | SK38A | SK3AA | 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 | $I_{(AV)}$ | 3 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half-sine-wave Superimposed on rated load (JEDEC method) | I_{FSM} | 80 | | | | | | | A |
| Maximum Forward Voltage at 3 A DC ¹⁾ | V_F | 0.55 | | 0.75 | | 0.85 | | V | |
| Maximum Reverse Current at Rated DC Blocking Voltage ¹⁾ | I_R | 0.5 | | | | | | | mA |
| $T_A = 25\text{ }^\circ\text{C}$ $T_A = 100\text{ }^\circ\text{C}$ | | 20 | | 10 | | | | | |
| Typical Junction Capacitance ³⁾ | C_J | 250 | | 160 | | | pF | | |
| Typical Thermal Resistance ²⁾ | $R_{\theta JA}$ $R_{\theta JL}$ | 88 28 | | | | | | | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range | T_J | - 65 to + 125 | | | - 65 to + 150 | | | $^\circ\text{C}$ | |
| Storage Temperature Range | T_S | - 65 to + 150 | | | | | | | $^\circ\text{C}$ |

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

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

³⁾ Measured at 1 MHz and applied reverse voltage of 4 V.



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FIG.1-FORWARD CURRENT DERATING CURVE

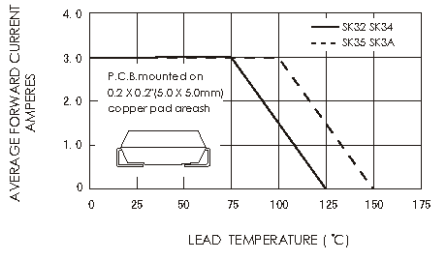


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

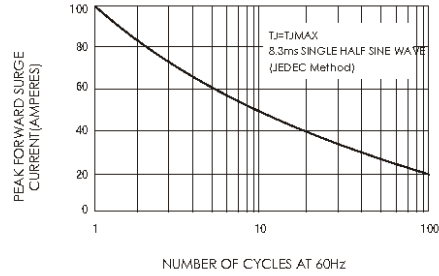


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

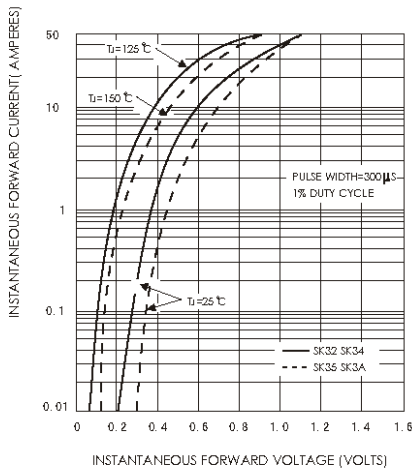


FIG.4-TYPICAL REVERSE CHARACTERISTICS

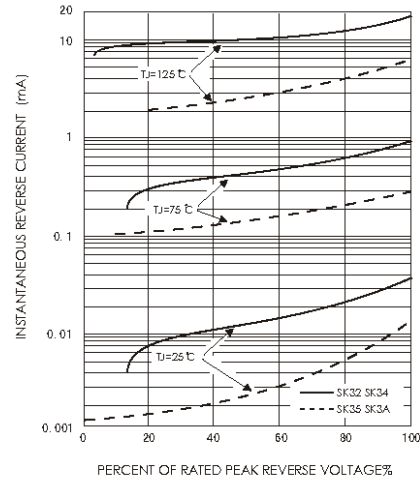


FIG.5-TYPICAL JUNCTION CAPACITANCE

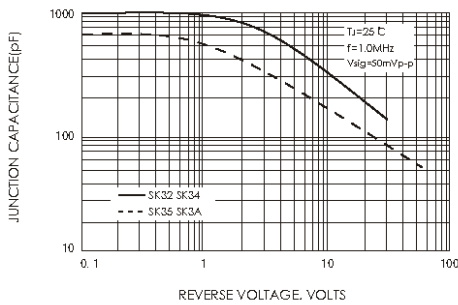
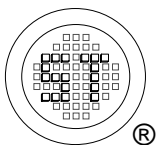
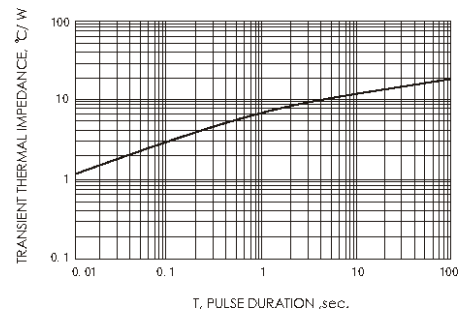


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098