

SS32D THRU SS3AD

SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 20 to 100 V

Forward Current - 3 A

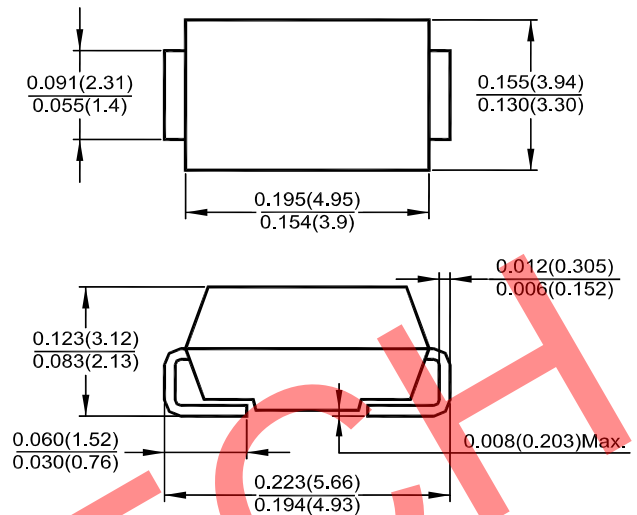
Features

- Plastic package has Underwriters Laboratories 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:** SMB (DO-214AA), molded plastic body
- **Terminals:** Solder plated, solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode end

SMB (DO-214AA)



Dimensions in inches and (millimeters)

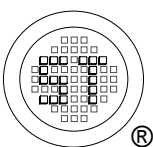
Absolute Maximum Ratings and Characteristics

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 | SS32D | SS33D | SS34D | SS35D | SS36D | SS38D | SS3AD | 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 at 0.375" (9.5 mm) Lead Length | $I_{F(AV)}$ | 3 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 80 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 3 A | V_F | 0.55 | | 0.75 | | 0.85 | | V | |
| Maximum Reverse Current at Rated DC Blocking at Voltage | I_R | 1.5 | | | | | | | mA |
| | | 20 | | 10 | | | | | |
| Typical Junction Capacitance ¹⁾ | C_j | 250 | | 160 | | | | pF | |
| Typical Thermal Resistance ²⁾ | $R_{\theta JA}$ $R_{\theta JL}$ | 55 | | | | 17 | | °C/W | |
| Operating Junction Temperature Range | T_j | - 65 to + 125 | | | - 65 to + 150 | | | °C | |
| Storage Temperature Range | T_{stg} | - 65 to + 150 | | | | | | | °C |

¹⁾ Measured at 1 MHz and reverse voltage of 4 V

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

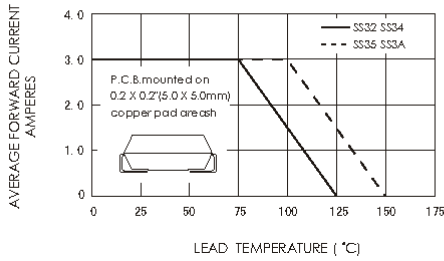


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

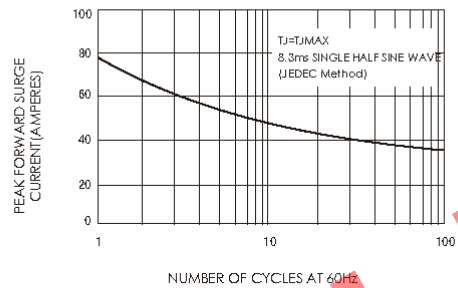


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

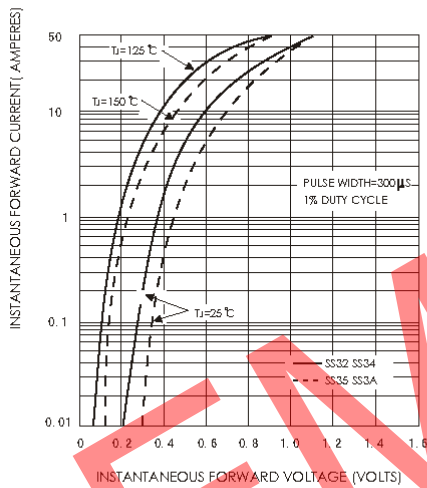


FIG.4-TYPICAL REVERSE CHARACTERISTICS

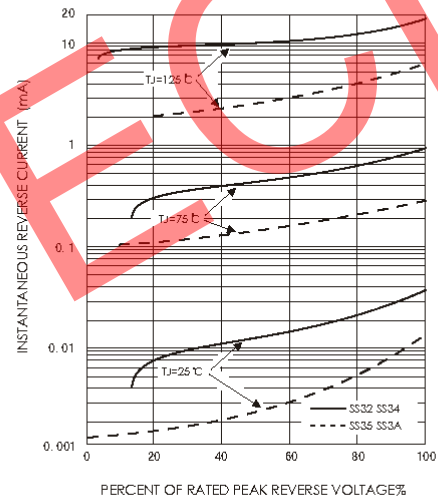


FIG.5-TYPICAL JUNCTION CAPACITANCE

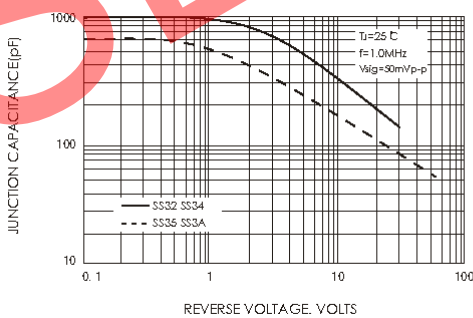
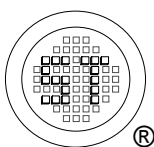
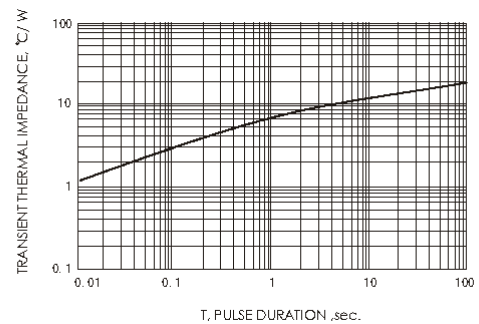


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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