SE2AD THRU SE2MD

SURFACE MOUNT HIGH EFFICIENT RECTIFIERS
Reverse Voltage - 50 to 1000 V
Forward Current - 2 A

Features
• High current capability
• High surge current capability
• High reliability
• Low reverse current
• Low forward voltage drop
• Fast switching for high efficiency

Mechanical Data
• Case: SMB (DO-214AA) molded plastic
• Epoxy: UL 94V-0 rate flame retardant
• Lead: Lead formed for surface mount
• Polarity: color band denotes cathode end
• Mounting position: Any

Maximum Ratings and Electrical Characteristics
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20 %.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbols</th>
<th>SE2AD</th>
<th>SE2BD</th>
<th>SE2DD</th>
<th>SE2ED</th>
<th>SE2GD</th>
<th>SE2JD</th>
<th>SE2KD</th>
<th>SE2MD</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Recurrent Peak Reverse Voltage</td>
<td>V_{RRM}</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>V</td>
</tr>
<tr>
<td>Maximum RMS Voltage</td>
<td>V_{RMS}</td>
<td>35</td>
<td>70</td>
<td>140</td>
<td>210</td>
<td>280</td>
<td>420</td>
<td>560</td>
<td>700</td>
<td>V</td>
</tr>
<tr>
<td>Maximum DC Blocking Voltage</td>
<td>V_{DC}</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>V</td>
</tr>
<tr>
<td>Maximum Average Forward Current Ta = 55 °C</td>
<td>I_{F(AV)}</td>
<td>2</td>
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<td></td>
<td></td>
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<td>A</td>
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<tr>
<td>Maximum Peak Forward Surge Current, 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)</td>
<td>I_{FSM}</td>
<td>75</td>
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<td></td>
<td>A</td>
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<tr>
<td>Maximum Forward Voltage at I_{F} = 2 A</td>
<td>V_{F}</td>
<td>1.1</td>
<td>1.7</td>
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<td></td>
<td>V</td>
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<tr>
<td>Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C</td>
<td>I_{R}</td>
<td>10</td>
<td>50</td>
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<td></td>
<td>μA</td>
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<td>Maximum Reverse Recovery Time 1)</td>
<td>t_{rr}</td>
<td>50</td>
<td>75</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>ns</td>
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<td>Typical Junction Capacitance 2)</td>
<td>C_{j}</td>
<td>50</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>pF</td>
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<td>Junction and Storage Temperature Range</td>
<td>T_{J}, T_{stg}</td>
<td>- 65 to + 150</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
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</tbody>
</table>

1) Reverse recovery test conditions: I_{F} = 0.5 A, I_{R} = 1 A, I_{rr} = 0.25 A
2) Measured at 1 MHz and applied reverse voltage of 4 V
FIG. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

NOTES:
1. Rise Time = 7 ns max., Input impedance = 1 megohm, 22 pF.
2. Rise time ≤ 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.

FIG. 2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

FIG. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

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