Features

- High saturation current
- Inductance range: 1.0 to 68 µH
- Heating current up to 2.7 A
- Dimensions: 4.5 x 4 x 3.2 mm
- AEC-Q200 qualified
- RoHS compliant* and halogen free**

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### Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance (µH)</th>
<th>Tol. (%)</th>
<th>SRF (MHz) Typ.</th>
<th>DCR (Ω) Typ.</th>
<th>DCR (Ω) Max.</th>
<th>I rms (A)</th>
<th>I sat (A)</th>
<th>**K-Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDE0403A-1R0M</td>
<td>1.0 ± 20</td>
<td>113</td>
<td>0.0193</td>
<td>0.048</td>
<td>2.7</td>
<td>4.8</td>
<td>490</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-2R2M</td>
<td>2.2 ± 20</td>
<td>76</td>
<td>0.0318</td>
<td>0.071</td>
<td>2.3</td>
<td>3.3</td>
<td>335</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-3R3M</td>
<td>3.3 ± 20</td>
<td>64</td>
<td>0.0469</td>
<td>0.086</td>
<td>2.0</td>
<td>2.5</td>
<td>255</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-4R7M</td>
<td>4.7 ± 20</td>
<td>50</td>
<td>0.0645</td>
<td>0.108</td>
<td>1.65</td>
<td>2.2</td>
<td>220</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-6R8M</td>
<td>6.8 ± 20</td>
<td>41</td>
<td>0.0936</td>
<td>0.126</td>
<td>1.45</td>
<td>1.7</td>
<td>182</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-8R2M</td>
<td>8.2 ± 20</td>
<td>38</td>
<td>0.106</td>
<td>0.142</td>
<td>1.4</td>
<td>1.6</td>
<td>163</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-100M</td>
<td>10 ± 20</td>
<td>36</td>
<td>0.127</td>
<td>0.172</td>
<td>1.05</td>
<td>1.4</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-120M</td>
<td>12 ± 20</td>
<td>32</td>
<td>0.146</td>
<td>0.197</td>
<td>1.0</td>
<td>1.3</td>
<td>135</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-150M</td>
<td>15 ± 20</td>
<td>29</td>
<td>0.192</td>
<td>0.259</td>
<td>0.85</td>
<td>1.2</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-180M</td>
<td>18 ± 20</td>
<td>28</td>
<td>0.237</td>
<td>0.309</td>
<td>0.75</td>
<td>1.1</td>
<td>112</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-220M</td>
<td>22 ± 20</td>
<td>25</td>
<td>0.27</td>
<td>0.351</td>
<td>0.7</td>
<td>0.95</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-270M</td>
<td>27 ± 20</td>
<td>22</td>
<td>0.322</td>
<td>0.419</td>
<td>0.65</td>
<td>0.85</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-330K</td>
<td>33 ± 10</td>
<td>20</td>
<td>0.373</td>
<td>0.485</td>
<td>0.6</td>
<td>0.8</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-390K</td>
<td>39 ± 10</td>
<td>18</td>
<td>0.449</td>
<td>0.561</td>
<td>0.55</td>
<td>0.7</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-470K</td>
<td>47 ± 10</td>
<td>16</td>
<td>0.505</td>
<td>0.631</td>
<td>0.5</td>
<td>0.65</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-560K</td>
<td>56 ± 10</td>
<td>15</td>
<td>0.736</td>
<td>0.92</td>
<td>0.45</td>
<td>0.6</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>SDE0403A-680K</td>
<td>68 ± 10</td>
<td>13</td>
<td>0.822</td>
<td>1.028</td>
<td>0.4</td>
<td>0.55</td>
<td>56</td>
<td></td>
</tr>
</tbody>
</table>

**K-Factor: To calculate core flux density, Bp-p (gauss) = K x L(µH) x A (peak-to-peak ripple current, A), determine core loss from Core Loss vs. Flux Density plot.

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### Core Loss vs. Flux Density

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**WARNING**
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

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** Bourns considers a product to be “halogen free” if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.
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**Inductance vs. IDC**

- **SDE0403A-2R2M**
  - L @ 25 °C
  - L @ 125 °C

- **SDE0403A-300K**
  - L @ 25 °C
  - L @ 125 °C

- **SDE0403A-150M**
  - L @ 25 °C
  - L @ 125 °C

- **SDE0403A-680K**
  - L @ 25 °C
  - L @ 125 °C

**ΔT @ 25 °C**

- **SDE0403A-2R2M**
  - ΔT @ 25 °C

- **SDE0403A-330K**
  - ΔT @ 25 °C

- **SDE0403A-150M**
  - ΔT @ 25 °C

- **SDE0403A-680K**
  - ΔT @ 25 °C

**How to Order**

- Model: SDE0403A - 100M
- Value Code (see table)

**Specifications**

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Soldering Profile

<table>
<thead>
<tr>
<th>Temperature Rising Area</th>
<th>Preheat Area</th>
<th>Reflow Area</th>
<th>Forced Cooling Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤0.0 °C/Sec. Max.</td>
<td>150<del>200 °C / 60</del>120 Sec.</td>
<td>+3.0 °C/Sec. Max.</td>
<td>≤0.0~0.5 °C/Sec. Max.</td>
</tr>
</tbody>
</table>

Peak Temperature: 250 °C

Max. Peak Temperature: 250 °C

Max. Time Above 217 °C: 90~150 sec. max.

Packaging Specifications

Dimensions: MM (INCHES)

REV. 11/19

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