ES2A THRU ES2K
SURFACE MOUNT SUPER FAST RECTIFIER
Reverse Voltage - 50 to 800 Volts Forward Current - 2.0 Amperes

FEATURES
The plastic package carries Underwriters Laboratory
Flammability Classification 94V-0
For surface mounted applications
Super fast switching for high efficiency
Low reverse leakage
Built-in strain relief, ideal for automated placement
High forward surge current capability
High temperature soldering guaranteed:
250°C/10 seconds at terminals

MECHANICAL DATA
Case: JEDEC DO-214AA molded plastic body
Terminals: Solder plated, solderable per MIL-STD-750,
Method 2026
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 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

<table>
<thead>
<tr>
<th>SYMBOLS</th>
<th>ES2A</th>
<th>ES2B</th>
<th>ES2C</th>
<th>ES2D</th>
<th>ES2E</th>
<th>ES2G</th>
<th>ES2J</th>
<th>ES2K</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum repetitive peak reverse voltage</td>
<td>VRRM</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>800</td>
</tr>
<tr>
<td>Maximum RMS voltage</td>
<td>VRMS</td>
<td>35</td>
<td>70</td>
<td>105</td>
<td>140</td>
<td>210</td>
<td>280</td>
<td>420</td>
<td>560</td>
</tr>
<tr>
<td>Maximum DC blocking voltage</td>
<td>VDC</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>800</td>
</tr>
<tr>
<td>Maximum average forward rectified current at TL=110°C</td>
<td>I(AV)</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Amps</td>
</tr>
<tr>
<td>Peak forward surge current</td>
<td>IFSM</td>
<td>50.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Amps</td>
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<tr>
<td>8.3ms single half sine-wave superimposed on rated load (JEDEC Method)</td>
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</tr>
<tr>
<td>Maximum instantaneous forward voltage at 2.0A</td>
<td>VF</td>
<td>0.95</td>
<td>1.3</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Volts</td>
</tr>
<tr>
<td>Maximum DC reverse current at rated DC blocking voltage</td>
<td>IR</td>
<td>5.0</td>
<td>200.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>µA</td>
</tr>
<tr>
<td>Maximum reverse recovery time (NOTE 1)</td>
<td>ttr</td>
<td>35</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ns</td>
</tr>
<tr>
<td>Typical junction capacitance (NOTE 2)</td>
<td>CJ</td>
<td>60.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Typical thermal resistance (NOTE 3)</td>
<td>RθJA</td>
<td>40.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C/W</td>
</tr>
<tr>
<td>Operating junction and storage temperature range</td>
<td>TJ,TSTG</td>
<td>-65 to +150</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
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</tbody>
</table>

Note: 1. Reverse recovery condition IR=0.5A,IR=1.0A,IR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. P.C.B. mounted with 0.2x0.2”(5.0x5.0mm) copper pad areas
RATINGS AND CHARACTERISTIC CURVES ES2A THRU ES2K

FIG. 1- FORWARD CURRENT DERATING CURVE

FIG. 2-MAXIMUM NON-REPEETITIVE 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

Note: Specification is subject to change without further notice. For more details and updates, please visit our website.