Main Product Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Conditions</th>
<th>Symbol</th>
<th>CSP15L50S-A</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak repetitive reverse voltage</td>
<td>V_{RRM}</td>
<td>150°C</td>
<td>50 V</td>
<td></td>
</tr>
<tr>
<td>Working peak reverse voltage</td>
<td>V_{RRM}</td>
<td>150°C</td>
<td>50 V</td>
<td></td>
</tr>
<tr>
<td>DC blocking voltage</td>
<td>V_{BR}</td>
<td>150°C</td>
<td>50 V</td>
<td></td>
</tr>
<tr>
<td>Forward rectified current</td>
<td>I_{F}</td>
<td>15 A</td>
<td>15 A</td>
<td></td>
</tr>
<tr>
<td>Forward surge current</td>
<td>I_{FSM}</td>
<td>280 A</td>
<td>280 A</td>
<td></td>
</tr>
<tr>
<td>Thermal resistance(1)</td>
<td>R_{J,C}</td>
<td>4 °C/W</td>
<td>4 °C/W</td>
<td></td>
</tr>
<tr>
<td>Operating and Storage temperature</td>
<td>T_{J}, T_{STG}</td>
<td>-55 ~ +150 °C</td>
<td>-55 ~ +150 °C</td>
<td></td>
</tr>
</tbody>
</table>

■ Features
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix “G” indicates Halogen-free part, ex.CSP15L50SG-A.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data
- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, TO-277.
- Lead : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight : Approximated 0.093 grams.

■ Maximum ratings and electrical characteristics
Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

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<th>Symbol</th>
<th>CSP15L50S-A</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse breakdown voltage</td>
<td>I_{R} = 0.5mA</td>
<td>V_{BRR,R}</td>
<td>50 V</td>
<td></td>
</tr>
<tr>
<td>Forward voltage drop</td>
<td>I_{F} = 15A, T_{J} = 25°C</td>
<td>V_{F}</td>
<td>550 mV</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I_{F} = 15A, T_{J} = 125°C</td>
<td>V_{F}</td>
<td>450 mV</td>
<td></td>
</tr>
<tr>
<td>Reverse current</td>
<td>V_{R} = V_{RRM}, T_{J} = 25°C</td>
<td>I_{R}</td>
<td>0.5 mA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>V_{R} = V_{RRM}, T_{J} = 125°C</td>
<td>I_{R}</td>
<td>100 mA</td>
<td></td>
</tr>
</tbody>
</table>

Note : 1.FR-4 PCB, 2oz.Copper.
2.Polymide PCB, 2oz.Copper.Cathode pad dimensions 18.8mm x 14.4mm. Anode pad dimensions 5.6mm x 14.4mm.
Rating and characteristic curves

Fig. 1 - Forward Current Derating Curve

Average Forward Current, Iₐ (A)

Case Temperature, Tₑ (°C)

25 50 75 100 125 150 175

15 10 5 0

Fig. 2 - Instantaneous Forward Characteristics

Instantaneous Forward Voltage, Vᵢ (Volts)

Instantaneous Forward Current, Iᵢ (A)

0 0.1 0.2 0.3 0.4 0.5 0.6

0 10 100

Tₑ = 25°C

Tₑ = 75°C

Tₑ = 100°C

Tₑ = 125°C

Tₑ = 150°C

Fig. 3 - Reverse Characteristics

Instantaneous Reverse Current, Iᵢ (mA)

Reverse Voltage, Vᵢ (V)

0 0.01 0.1 1 10 100

Tᵢ = 25°C

Tᵢ = 50°C

Tᵢ = 75°C

Tᵢ = 100°C
■ TO-277 foot print

![Diagram](image)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.185 (4.70)</td>
<td>0.142 (3.60)</td>
<td>0.152 (3.87)</td>
<td>0.260 (6.60)</td>
<td>0.055 (1.40)</td>
<td>0.035 (0.90)</td>
<td>0.031 (0.80)</td>
</tr>
</tbody>
</table>

Dimensions in inches and (millimeters)

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