This series of Zener diodes is offered in the convenient, surface mount plastic SOT-23 package. These devices are designed to provide voltage regulation with minimum space requirement. They are well suited for applications such as cellular phones, hand held portables, and high density PC boards.

Features

- 225 mW Rating on FR-4 or FR-5 Board SOT-23 Plastic Package
- Zener Breakdown Voltage Range –2.4V to 75V
- Package Designed for Optimal Automated Board Assembly
- Small Package Size for High Density Applications
- ESD Rating of Class 3(>16KV) per Human Body Model

Absolute Maximum Ratings (T_a = 25°C)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>P_D</td>
<td>225</td>
<td>mW</td>
</tr>
<tr>
<td>1.8</td>
<td>mW/°C</td>
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</tr>
<tr>
<td>R_JA</td>
<td>556</td>
<td>°C/W</td>
</tr>
<tr>
<td>P_D</td>
<td>300</td>
<td>mW</td>
</tr>
<tr>
<td>2.4</td>
<td>mW/°C</td>
<td></td>
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<tr>
<td>R_JA</td>
<td>417</td>
<td>°C/W</td>
</tr>
<tr>
<td>T_J, T_S</td>
<td>-65 to +150</td>
<td>°C</td>
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</tbody>
</table>

1. FR-5 = 1 X 0.75 X 0.62 in.
2. Alumina = 0.4 X 0.3 X 0.024 in, 99.5% alumina
### Electrical Characteristics

(\(T_a = 25^\circ C\) unless otherwise noted, \(V_C = 0.9V\) Max. @ \(I_C = 10mA\))

<table>
<thead>
<tr>
<th>Device</th>
<th>Marking Code</th>
<th>(V_C(V)) @ (I_{ZT1} = 5mA) (Note 3.)</th>
<th>(Z_{ZT1}(\text{Ohms})) @ (I_{ZT1} = 1mA) (Note 3.)</th>
<th>(V_C(V)) @ (I_{ZT2} = 1mA) (Note 3.)</th>
<th>(Z_{ZT2}(\text{Ohms})) @ (I_{ZT2} = 2mA) (Note 4.)</th>
<th>Max Reverse Leakage Current</th>
<th>(V_C(mV/k)) @ (I_{ZT3} = 5mA) (Note 3.)</th>
<th>(C_{pF}(\text{f=1MHz}))</th>
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<tbody>
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<td>22.7</td>
<td>25.5</td>
<td>250</td>
<td>22.9</td>
</tr>
</tbody>
</table>

3. Tested with pulses \(tp = 20\) ms.

4. The Zener impedance, \(Z_{ZT2}\), for the 27 through 75 volt types is tested at 0.5 mA rather than the test current of 0.1 mA used for \(V_{Z2}\)

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**SEMTECH ELECTRONICS LTD.**

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Dated: 19/10/2005