Nexperia’s SiGe rectifiers combine the high efficiency of Schottky rectifiers with the thermal stability of fast recovery diodes. Targeting automotive, server markets and communications infrastructure, the AEC-Q101 compliant rectifiers are of particular benefit in high-temperature applications. These extremely low leakage devices allow an extended safe-operating area with no thermal runaway up to 175 °C. And, at the same time, offer significant room to optimize your design towards higher efficiency.

**Product features**
- $V_r$ of 120 V, 150 V, 200 V; $I_r$ of 1, 2, 3 A
- Low forward voltage and low $Q_r$
- Extremely low leakage current of < 1nA
- Thermal stability up to 175 °C $T_j$
- Fast and smooth switching
- Low parasitic capacitance and inductance
- AEC-Q101 qualified
- Space-saving, rugged CFP packaging

**Applications**
- Automotive
- LED Lighting
- Engine control units
- Communications infrastructure
- Server Power

**Advanced clip-bonded FlatPower (CFP) packaging**
- Reduced package resistance for better electrical performance
- Easy pin to pin replacement with Schottky and fast recovery rectifiers in market standard CFP package
- Solid copper clip for high thermal performance and power dissipation
- Reduced package inductance for improved switching behavior and less parasitics in the circuit
SiGe rectifiers benefits

**Excellent efficiency**
- Reduced reverse current ($I_r$) compared to Schottkys
- Lower forward voltage ($V_f$) compared to fast recovery rectifiers for low power losses

**Extended safe operating area**
- Safe operation at high temperatures
- Stable operation at maximum reverse voltage

### SiGe rectifiers in clip-bond packages

<table>
<thead>
<tr>
<th>$V_f$ max (V)</th>
<th>$I_r$ max (A)</th>
<th>$V_f$ max (mV) @ $I_r$ max</th>
<th>$I_r$ max (µA) @ $V_f$ max</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>1</td>
<td>840</td>
<td>0.03</td>
<td>CFP5 (SOD128)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>PMEG120G10ELR</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>PMEG120G20ELP</td>
</tr>
<tr>
<td>150</td>
<td>1</td>
<td>850</td>
<td>0.03</td>
<td>CFP3 (SOD123W)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>PMEG150G10ELR</td>
</tr>
<tr>
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<td>3</td>
<td></td>
<td></td>
<td>PMEG150G20ELP</td>
</tr>
<tr>
<td>200</td>
<td>1</td>
<td>880</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Size (mm): 3.8 x 2.5 x 1.0
$P_{on}$ (mW) @ 1 cm²: 1200

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