Automotive-grade SiC diodes boost the performance of power converters

The wide bandgap of our silicon carbide (SiC) diodes enables the design of high-voltage Schottky diodes offering negligible reverse recovery at turn-off and minimal capacitive turn-off behavior independent of temperature. Our high-performance power Schottky rectifiers can handle up to 650 V with the lowest forward voltage drop (Vf) on the market for optimal efficiency. ST is the first supplier worldwide to offer 100% automotive-grade SiC diodes (AEC-Q101 qualified and PPAP capable).

**KEY FEATURES**
- 100% automotive-grade
- AEC-Q101 qualified
- PPAP capable
- Very low forward conduction losses
- Low switching losses
- Soft switching behavior
- High forward surge capability
- High Tj capability Tj(MAX) = 175 °C
- 650 V guaranteed @ -40 °C

**KEY BENEFITS**
- High efficiency adds value to the power converter
- Reduces size and cost of the power converter
- Low EMC impact, simplifies certification and reduces time to market
- Natural high robustness ensuring very high reliability

www.st.com/sicdiodes
SiC diodes reduce switching power losses
Reverse recovery comparison

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 AUTOMOTIVE-GRADE SiC diodes with very low forward voltage drop

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Packages

- TO-220AC
- D2PAK
- D2PAK HV
- DO-247
- TO-247

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Product portfolio offer
3 New automotive grade SiC diodes in mass production

<table>
<thead>
<tr>
<th>Part number</th>
<th>Current rating (A)</th>
<th>Voltage rating (V)</th>
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