SE20Nx, SE30Nx, and SE40Nx Automotive Grade
200 V, 400 V, and 600 V Standard Rectifiers Deliver
High Current Ratings to 4 A, Are Industry’s First in
Power DFN Series DFN3820A Package With Low
0.88 mm Profile and Wettable Flanks

Product Benefits:
- High current ratings from 2 A to 4 A
- Available reverse voltages: 200 V, 400 V, and 600 V
- Offered in the DFN3820A package with wettable flanks
  - Compact 3.8 mm by 2.0 mm footprint and an extremely low typical height of 0.88 mm
- AEC-Q101 qualified
- Feature an oxide planar chip junction design
- Typical reverse leakage current less than 0.1 μA
- Low forward voltage drop down to 0.86 V reduces power losses to improve efficiency
- Wide temperature range from -55 °C to +175 °C
- ESD capability in compliance with IEC 61000-4-2, air discharge mode
- Ideal for automated placement
- MSL moisture sensitivity level of 1, per J-STD-020, LF maximum peak of 260 °C
- RoHS-compliant and halogen-free

Market Applications:
- Power line polarity protection and rail to rail protection in commercial, industrial, and automotive applications

The News:
Vishay Intertechnology introduces three new series of Automotive Grade surface-mount standard rectifiers that are the industry’s first devices in the Power DFN Series DFN3820A package with wettable flanks. Providing space-saving, high efficiency solutions, the 2 A SE20Nx, 3 A SE30Nx, and 4 A SE40Nx are each available with reverse voltages of 200 V, 400 V, and 600 V.
- The first package in Vishay’s new Power DFN family, the DFN3820A’s compact footprint and low profile allow the SE20Nx, SE30Nx, and SE40Nx to make more efficient use of PCB space
- The devices’ optimized copper mass design and advanced die placement technology allow for superior thermal performance that enables operation at higher current ratings
- Compared to devices in the SMP (DO-220AA) package with the same footprint, the SE20Nx, SE30Nx, and SE40Nx offer a 12 % lower profile and double the current rating
- The rectifiers offer equivalent or higher current ratings to larger devices in the conventional SMB (DO-214AA) and SMC (DO-214AB) packages, as well as the eSMP® series SlimSMA (DO-221AC), SlimSMAW (DO-221AD), SMPA (DO-2212BC), and SMPC (TO-2778A)

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The Key Specifications:

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<tr>
<th>Part #</th>
<th>$I_{F(\text{AV})}$ (A)</th>
<th>$V_{\text{RRM}}$ (V)</th>
<th>$I_{F_{\text{SM}}}$ (A)</th>
<th>$V_F$ at $I_F$ and $T_J$</th>
<th>$T_J$ max. ($^\circ$C)</th>
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Availability:
Samples and production quantities of the new Power DFN standard rectifiers in the DFN3820A package are available now, with lead times of 12 weeks.

To access the product datasheets on the Vishay Website, go to
http://www.vishay.com/ppg?98368  (SE30ND, SE30NG, SE30NJ)
http://www.vishay.com/ppg?98369  (SE40ND, SE40NG, SE40NJ)

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