

Ultra- And Hyperfast Recovery Rectifiers For Automotive

[Nexperia's](#) 650-V ultra- and hyperfast recovery rectifiers in D²PAK Real-2-Pin (R2P) packaging are designed for use in various automotive, industrial and consumer applications including charging adapters, photovoltaic (PV), inverters, servers and switched mode power supplies (SMPSs). Combining planar die technology with a state-of-the-art junction termination (JTE) design, these rectifiers offer high power density, fast switching times with soft recovery and excellent reliability.

They are encapsulated in a D²PAK Real-2-Pin package (SOT8018), which offers the same package outline as the standard D²PAK package but has only two pins instead of three (the middle cathode pin has been removed). This increases the pin-to-pin distance from 1.25 mm to over 4 mm, which allows the devices to meet creepage and clearance requirements stated in the IEC-60664 standard.

"These recovery rectifiers further demonstrate Nexperia's expertise in the field of semiconductor device packaging" according to Frank Matschullat, head of Product Group Power Bipolar Discretes at Nexperia. "By taking the innovative step of removing the cathode pin from a standard D²PAK package, Nexperia has created a Real-2-Pin package that can meet the creepage and clearance requirements, in particular for high-voltage automotive applications."

For more information, see the recovery rectifiers [page](#).



Figure. By removing the middle pin, the D²PAK Real-2-Pin package configuration increases pin-to-pin distance from 1.25 mm to over 4 mm, allowing rectifiers to comply with higher creepage and clearance standards as required in high-voltage automotive applications.