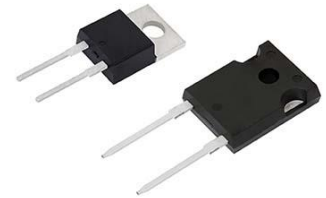




New 15 A to 75 A AEC-Q101 Qualified FRED Pt[®] Gen 5 600 V Hyperfast and Ultrafast Rectifiers Offer Best in Class Reverse Recovery Losses, Increasing the Efficiency of AC/DC and DC/DC Converters in EV / HEV On-Board Chargers

Product Benefits:

- AEC-Q101 qualified
- Forward currents of 15 A, 30 A, 60 A, and 75 A
- Offered in TO-247AD and TO-220AC packages
- Available in X-type Hyperfast and H-type Ultrafast speed classes
 - X-type devices offer the advantage of lower Q_{RR}
 - H-type rectifiers feature lower forward voltage
- High temperature operation to +175 °C
- RoHS-compliant and halogen-free



Market Applications:

- High speed LLC output rectification stages for EV / HEV on-board chargers

The News:

Vishay Intertechnology introduces 10 new AEC-Q101 qualified FRED Pt[®] Gen 5 600 V Hyperfast and Ultrafast rectifiers for automotive applications. Offering the best reverse recovery performance for devices in their class, the 15 A, 30 A, 60 A, and 75 A Vishay Semiconductors rectifiers are designed to increase the efficiency of AC/DC and DC/DC converters and of hard- and soft-switched or resonant designs.

- The devices offer 30 % lower reverse recovery losses than the closest competing rectifiers and 48 % lower than previous-generation FRED Pt solutions, while maintaining low conduction and switching losses
 - The result is improved light- and full-load efficiency



The Key Specifications:

Part #	V _R (V)	I _{F(AV)} (A)	V _F typ. (V) ¹	Q _{RR} typ. (nC) ²	Speed class	t _{rr} typ. (ns) ³	T _J max. (°C)	Package
VS-E5TH1506THN3	600	15	1.15	782	H	22	175	TO-220AC 2L
VS-E5TX1506THN3	600	15	1.3	578	X	19	175	TO-220AC 2L
VS-E5TH3006THN3	600	30	1.15	1560	H	25	175	TO-220AC 2L
VS-E5TX3006THN3	600	30	1.3	952	C	22	175	TO-220AC 2L
VS-E5PH3006LHN3	600	30	1.15	1560	H	25	175	TO-247AD 2L
VS-E5PX3006LHN3	600	30	1.3	952	X	22	175	TO-247AD 2L
VS-E5PH6006LHN3	600	60	1.2	2385	H	29	175	TO-247AD 2L
VS-E5PX6006LHN3	600	60	1.4	1568	X	26	175	TO-247AD 2L
VS-E5PH7506LHN3	600	75	1.2	3090	H	32	175	TO-247AD 2L
VS-E5PX7506LHN3	600	75	1.4	2048	X	29	175	TO-247AD 2L

¹I_F = rated current, T_J = 125 °C

²T_J = 125 °C, I_F = rated current A, V_R = 400 V, di_F/dt = 1000 A/μs

³T_J = 25 °C I_F = 1 A di_F/dt = 100 A/μs, V_R = 30 V

Availability:

Samples and production quantities of the new FRED Pt rectifiers 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?96824> (VS-E5TH1506THN3)
- <http://www.vishay.com/ppg?96826> (VS-E5TX1506THN3)
- <http://www.vishay.com/ppg?96825> (VS-E5TH3006THN3)
- <http://www.vishay.com/ppg?96827> (VS-E5TX3006THN3)
- <http://www.vishay.com/ppg?96763> (VS-E5PH3006LHN3)
- <http://www.vishay.com/ppg?96810> (VS-E5PX3006LHN3)
- <http://www.vishay.com/ppg?96764> (VS-E5PH6006LHN3)
- <http://www.vishay.com/ppg?96821> (VS-E5PX6006LHN3)
- <http://www.vishay.com/ppg?96819> (VS-E5PH7506LHN3)
- <http://www.vishay.com/ppg?96820> (VS-E5PX7506LHN3)

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