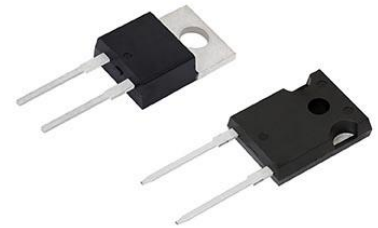




New 15 A to 75 A FRED Pt[®] Gen 5 600 V Hyperfast and Ultrafast Rectifiers Offer Best in Class Reverse Recovery Losses, Increasing the Efficiency of AC/DC and DC/DC Converters in EV / HEV Battery Charging Stations and High Frequency Stages for UPS Applications

Product Benefits:

- Forward currents of 15 A, 30 A, 60 A, and 75 A
- Offered in TO-220AC and TO-247AD 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 battery charging stations and high frequency stages for UPS applications

The News:

Vishay Intertechnology introduces 10 new FRED Pt[®] Gen 5 600 V Hyperfast and Ultrafast rectifiers. 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	Package
VS-E5TH1506-M3	600	15	1.15	782	H	22	TO-220AC 2L
VS-E5TX1506-M3	600	15	1.3	578	X	19	TO-220AC 2L
VS-E5TH3006-M3	600	30	1.15	1560	H	25	TO-220AC 2L
VS-E5TX3006-M3	600	30	1.3	952	X	22	TO-220AC 2L
VS-E5PH3006L-N3	600	30	1.15	1560	H	25	TO-247AD 2L
VS-E5PX3006L-N3	600	30	1.3	952	X	22	TO-247AD 2L
VS-E5PH6006L-N3	600	60	1.2	2385	H	29	TO-247AD 2L
VS-E5PX6006L-N3	600	60	1.4	1568	X	26	TO-247AD 2L
VS-E5PH7506L-N3	600	75	1.2	3090	H	32	TO-247AD 2L
VS-E5PX7506L-N3	600	75	1.4	2048	X	29	TO-247AD 2L

¹ I_F = rated current, $T_J = 125$ °C

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



NEW PRODUCT INFORMATION



Product Group: Vishay Semiconductors, Rectifiers / March 2021

$^3T_J = 25\text{ }^\circ\text{C}$ $I_F = 1\text{ A}$ $di_F/dt = 100\text{ A}/\mu\text{s}$, $V_R = 30\text{ V}$

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?96751> (VS-E5TH1506-M3)
<http://www.vishay.com/ppg?96752> (VS-E5TX1506-M3)
<http://www.vishay.com/ppg?96753> (VS-E5TH3006-M3)
<http://www.vishay.com/ppg?96754> (VS-E5TX3006-M3)
<http://www.vishay.com/ppg?96623> (VS-E5PH3006L-N3)
<http://www.vishay.com/ppg?96757> (VS-E5PX3006L-N3)
<http://www.vishay.com/ppg?96755> (VS-E5PH6006L-N3)
<http://www.vishay.com/ppg?96758> (VS-E5PX6006L-N3)
<http://www.vishay.com/ppg?96756> (VS-E5PH7506L-N3)
<http://www.vishay.com/ppg?96759> (VS-E5PX7506L-N3)

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