



Vishay Intertechnology's New AEC-Q101 Qualified FRED Pt® Gen 5 600 V Hyperfast and Ultrafast Rectifiers Offer Best in Class Reverse Recovery Losses

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15 A to 75 A Devices Increase the Efficiency of AC/DC and DC/DC Converters in EV / HEV On-Board Chargers

MALVERN, Pa., Nov. 03, 2021 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today introduced 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 released today 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 in high speed LLC output rectification stages for EV / HEV on-board chargers.

The rectifiers are available in TO-247AD and TO-220AC packages and in X-type Hyperfast and H-type Ultrafast speed classes. X-type devices offer the advantage of lower Q_{RR} , while H-type rectifiers feature lower forward voltage. RoHS-compliant and halogen-free, the components offer high temperature operation to +175 °C.

Device Specification Table:

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

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

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

Samples and production quantities of the new FRED Pt rectifiers are available now, with lead times of 12 weeks.

Vishay manufactures one of the world's largest portfolios of discrete semiconductors and passive electronic components that are essential to innovative designs in the automotive, industrial, computing, consumer, telecommunications, military, aerospace, and medical markets. Serving customers worldwide, Vishay is **The DNA of tech.**™ Vishay Intertechnology, Inc. is a Fortune 1,000 Company listed on the NYSE (VSH). More on Vishay at www.vishay.com.

The DNA of tech™ is a trademark and FRED Pt is a registered trademark of Vishay Intertechnology.

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Share it on Twitter: [http://twitter.com/intent/tweet?text=@vishayindust today introduced 10 new AEC-Q101 qualified FRED Pt® Gen 5 600 V Hyperfast and Ultrafast rectifiers for automotive applications. - https://bit.ly/3k3nqEv](http://twitter.com/intent/tweet?text=@vishayindust%20today%20introduced%2010%20new%20AEC-Q101%20qualified%20FRED%20Pt%20Gen%205%20600%20V%20Hyperfast%20and%20Ultrafast%20rectifiers%20for%20automotive%20applications.%20-%20https://bit.ly/3k3nqEv)

Links to product datasheets:

<http://www.vishay.com/ppg?296824> (VS-E5TH1506THN3)

<http://www.vishay.com/ppg?296826> (VS-E5TX1506THN3)

<http://www.vishay.com/ppg?296825> (VS-E5TH3006THN3)

<http://www.vishay.com/ppg?296827> (VS-E5TX3006THN3)

<http://www.vishay.com/ppg?296763> (VS-E5PH3006LHN3)

<http://www.vishay.com/ppg?296810> (VS-E5PX3006LHN3)

<http://www.vishay.com/ppg?296764> (VS-E5PH6006LHN3)

<http://www.vishay.com/ppg?296821> (VS-E5PX6006LHN3)

<http://www.vishay.com/ppg?296819> (VS-E5PH7506LHN3)

<http://www.vishay.com/ppg?296820> (VS-E5PX7506LHN3)

Link to product photo:

<https://www.flickr.com/photos/vishay/albums/72157720087379217>

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