New FRED Pt® Gen 5 1200 V, 75 A Hyperfast and Ultrafast Rectifiers

We've expanded our portfolio of FRED Pt® Gen 5 1200 V hyperfast and ultrafast rectifiers with current ratings up to 75 A. To increase the efficiency of high frequency converters and hard- and soft-switched or resonant designs, the new VS-E5PH7512L-N3 and VS-E5PX7512L-N3 offer the best conduction and switching loss trade-off for devices in their class.

- Matched to operate with MOSFETs or high speed IGBTs
- Offer up to 10 % lower losses than competing silicon solutions
  - Cut the efficiency gap with SiC diodes in half
  - Provide a cost-effective alternative for applications with frequencies in the range of 50 kHz
- Offer the same forward voltage as competing solutions, while delivering up to 40 % lower switching losses and Q_{RR}

The Key Specifications:

KEY SPECIFICATIONS: SINGLE DIODE, 1200 V, 75 A CURRENT RATING							
Part Number	**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-E5PH7512L-N3	1200	75	1.85	7100	H	40	TO-247AD 2L
VS-E5PX7512L-N3	1200	75	2.3	5300	X	32	TO-247AD 2L

Notes

[1] I_F = rated current, T_J = 125 °C

[2] T_J = 125 °C, I_F = rated current A, V_R = 1000 V, dI_F/dt = 800 A/µs

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

Product Benefits:

- Forward currents of 75 A
- Offered in theTO-247AD 2L (single diode) package
- Available in X-type hyperfast and H-type ultrafast speed classes
  - X-type rectifiers offer the advantage of lower Q_{RR}
  - H-type devices feature lower forward voltage
- High temperature operation to +175 °C

Market Applications:

- PFC and output rectification stages for EV / HEV battery charging stations, booster stages for solar inverters, and UPS and welding applications

© 2022 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED.

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

Useful Links

- Our full portfolio of Fred Pt Gen 5 1200 V diodes can be seen in the following product sheet (www.vishay.com/doc?48518)
- Fred Pt Gen 5 1200 V diodes infographic: www.vishay.com/doc?48740

For further information, please contact your regional Vishay office.

Contact Information		
The Americas	**Europe**	**Asia / Pacific**
Diodes-Americas@vishay.com	Diodes-Europe@vishay.com	Diodes-Asia@vishay.com

© 2022 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED.

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000