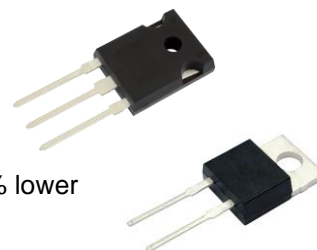




Vishay Expands Portfolio of FRED Pt® Gen 5 1200 V Hyperfast and Ultrafast Rectifiers

Vishay announces the availability of 12 new FRED Pt® Gen 5 1200 V Hyperfast and Ultrafast rectifiers, which offer the best conduction and switching loss trade-off for devices in their class. Ranging from 8 A up to 60 A, in single- and dual-diode configurations, the Vishay rectifiers are designed to increase the efficiency of high frequency converters and hard- and soft-switched or resonant designs.

- 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:

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-E5TH0812-M3	1200	8	1.8	1350	H	33	2L TO-220AC
VS-E5TX0812-M3	1200	8	2.1	960	X	27	2L TO-220AC
VS-E5TH1512-M3	1200	15	1.7	1985	H	37	2L TO-220AC
VS-E5TX1512-M3	1200	15	2.1	1600	X	29	2L TO-220AC
VS-E5TH3012-M3	1200	30	1.7	3215	H	32	2L TO-220AC
VS-E5TX3012-M3	1200	30	2.1	2400	X	26	2L TO-220AC
VS-C5TH3012-M3	1200	30 (2 x 15)	1.7	1985	H	37	3L TO-220AB
VS-C5TX3012-M3	1200	30 (2 x 15)	2.1	1600	X	29	3L TO-220AB
VS-C5PH3012L-N3	1200	30 (2 x 15)	1.7	1200	H	37	TO-247AD 3L
VS-C5PX3012L-N3	1200	30 (2 x 15)	2.1	1600	X	29	TO-247AD 3L
VS-C5PH6012L-N3	1200	60 (2 x 30)	1.7	3215	H	32	TO-247AD 3L
VS-C5PX6012L-N3	1200	60 (2 x 30)	2.1	2400	X	26	TO-247AD 3L

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 8 A to 60 A
- Offered in the following packages: 2L TO-220AC / TO-247AD 2L (single diode) and 3L TO-220AB / TO-247AD 3L (dual diode)
- 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

Useful Links

- The full portfolio of Fred Pt Gen5 1200 V diodes can be seen in the following product sheet:
www.vishay.com/doc?48518

FOR FURTHER INFORMATION, PLEASE CONTACT YOUR REGIONAL MARKETING OFFICE AS LISTED BELOW:

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