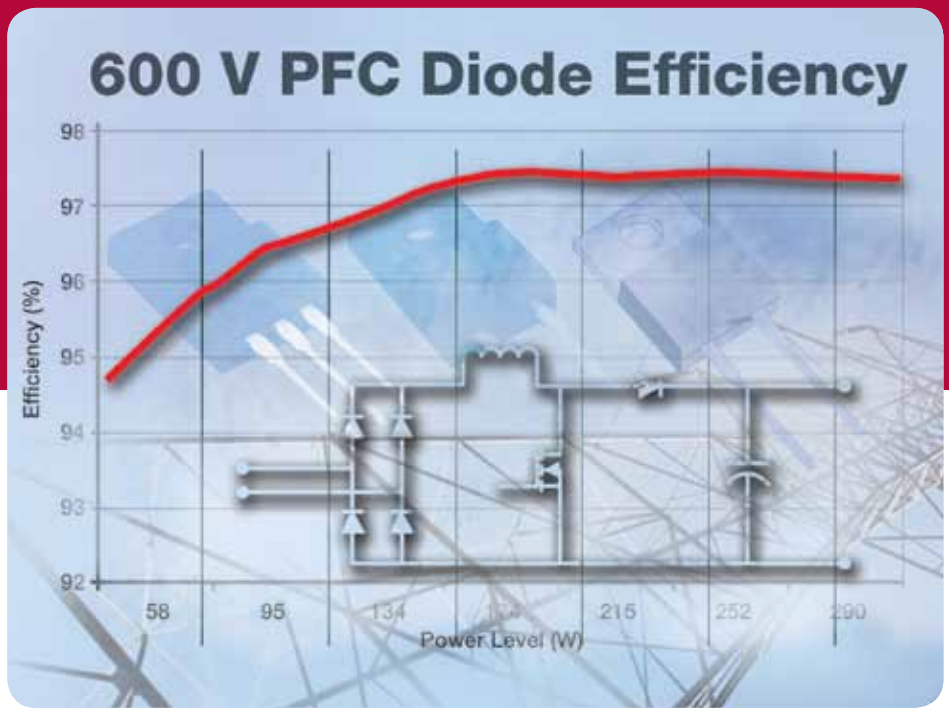
HIGH-FREQUENCY ULTRAFAST RECTIFIERS: NEW 600-V FRED PT™

Series Targets CCM PFC Stages for Power Supplies



Lowest switching losses for Si-based devices

KEY BENEFITS

- Highest system efficiency compared to other hyperfast diodes
- Lowest switching losses
- Reduces ringing up to the highest di/dt to limit EMI
- Suitable for high-frequency applications

APPLICATIONS

- Server power supplies
- High-end desktop power supplies
- Telecom power supplies
- Solar inverters

Datasheets are available on our web site at www.vishay.com
for 8S2TH06I-M - http://www.vishay.com/ppg?93049
for 8STH06FP - http://www.vishay.com/ppg?94554
for 8S2TH06FP - http://www.vishay.com/ppg?94553
for 15STH06FP - http://www.vishay.com/ppg?94556
for 15S2TH06FP - http://www.vishay.com/ppg?94555

NEW FRED Pt™ 600-V HIGH-FREQUENCY RECTIFIERS

This new series of rectifiers completes Vishay's offering of products specifically developed for PFC applications, which includes the state-of-the-art "X" and "H" series for CCM PFC and the "L" series specifically developed for DCM PFC applications.

Device	$I_{F(AV)}$ (A)	@ TC (°C)	V_{FM} @ 125 °C (Typ) (V)	I_R @ 125 °C (Typ) (µA)	Q_{RR} @ 125 °C @ $I_{F(AV)}$ @ 200 A/µs @ 390 V (ns)	T_J Max (°C)	Package
8S2TH06I-M	8	120	2.1 at 8 A	7	35	175	ITO-220AC
8STH06FP	8	93	1.7 at 8 A	7	84	175	TO-220FPAB
8S2TH06FP	8	93	1.7 at 8 A	7	84	175	TO-220FPAC
15STH06FP	15	73	1.9 at 15 A	10	140	175	TO-220FPAB
15S2TH06FP	15	73	1.9 at 15 A	10	140	175	TO-220FPAC

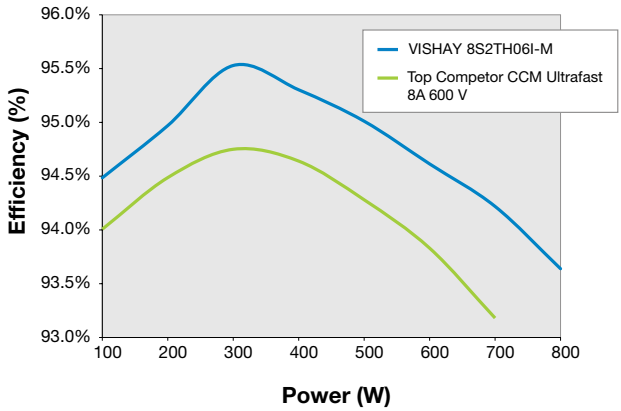
Packages:

TO-220FPAB | TO-220FPAC | 2-pin ITO-220 (ITO-220AC)

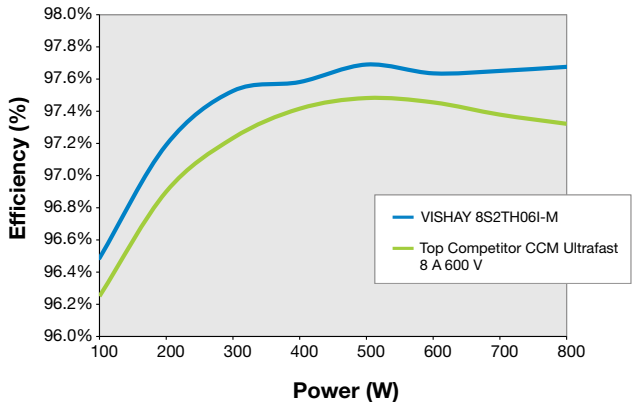
Features

- 2 x 300-V silicon die for system efficiencies higher than 97 %
- Extremely low Q_{RR} as low as 35 nC in hard switching conditions
- Low forward voltage ratings: 1.7 V, 1.9 V and 2.1 V at rated current
- Maximum operating junction temperature of +175 °C
- Very soft recovery characteristics, even at extremely high di/dt with minimum ringing
- Extremely low leakage currents: less than 1 µA @ 25 °C; less than 10 µA @ 125 °C
- Available in TO-220FPAC, TO-220FPAB and in isolated TO-220AC
- Cost-effective alternative to SiC diodes

110 V Input



230 V Input



Build **Vishay** into your **Design**