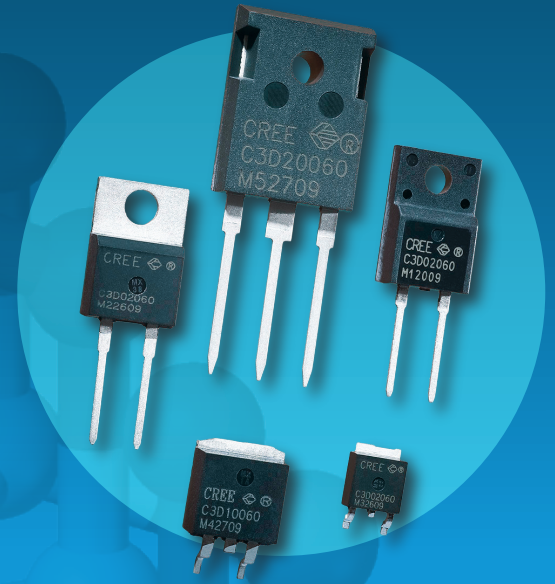
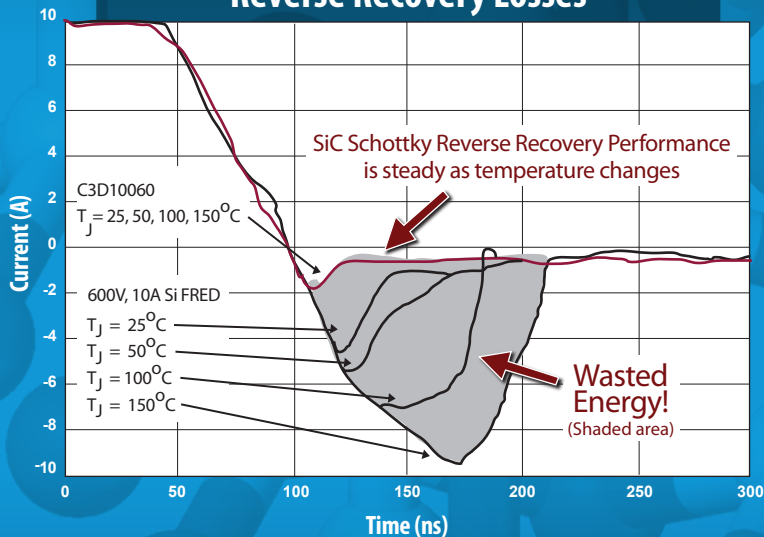


Cree's *Z-Rec*[™] SiC Schottky Diodes in PFC Applications

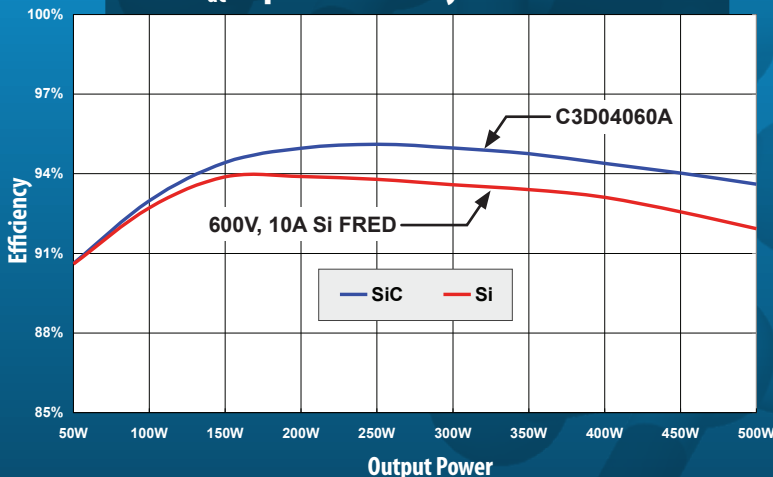
- No Reverse Recovery Current
- Reverse Recovery Characteristic is Independent of:
 - » Operating Temperature
 - » Forward Bias Current
 - » di/dt



Cree SiC Schottkys vs. Si FRED Reverse Recovery Losses

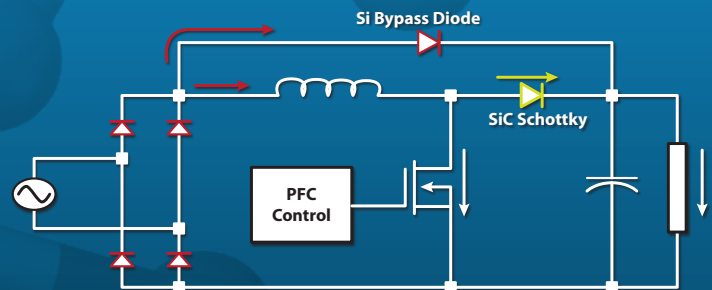


90 V_{ac} Input Efficiency Measurements



Replacing Si PFC Boost Diodes with Cree SiC Schottky Boost Diodes:

- Improves System Efficiency
- Lowers Switching Losses
- Reduces Physical Size of System by:
 - » Decreasing Component Count
 - » Allowing Higher Switching Frequency
- May Lower System Cost
- Shortens Design Cycle



Cree SiC Schottky boost diode achieves up to 2% efficiency improvement with a single component change which equals up to 24% reduction in power loss.



Device Selection Guide and Ordering Information

C3D06060A

« Part Number System

- Package
- Voltage Rating (V)
- Current Rating (A)
- Cree Z-Rec™ Schottky Diode Family

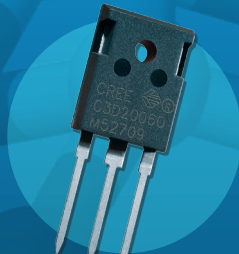
Cree P/N	Available Packages	V_{RRM} (V)	$I_{F(AVG)}$ (A)	PFC Output Power (first diode choice criteria)	Max. Secondary (Repetitive) Surge Current (A) @ $T_c = 110^\circ\text{C}$
CSD01060	A, E	600	1	100 – 150 W	5
C3D02060	A, E, F	600	2	200 – 300 W	9
C3D03060	A, E, F	600	3	300 – 450 W	15
C3D04060	A, E, F	600	4	400 – 600 W	17
C3D06060	A, G	600	6	600 – 900 W	27
C3D08060	A, G	600	8	800 – 1200 W	36
C3D10060	A, G	600	10	1000 – 1500 W	44
C3D20060	D	600	20	1500 – 3000 W	88

Device Selection Guide (for reference only)

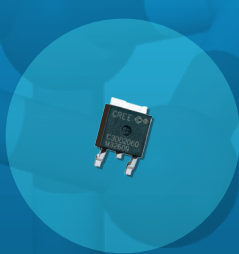
Package Code:



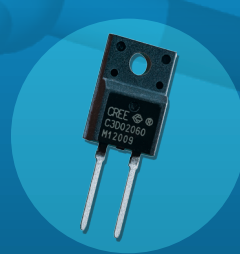
A: TO-220



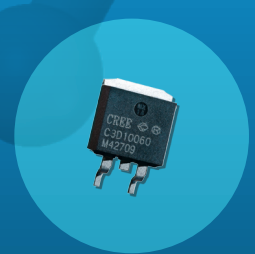
D: TO-247 (TO-3P)



E: TO-252 D-PAK



F: TO-220 Fully Isolated



G: TO-263 D²PAK

For more information, please visit:

www.cree.com/products/power or contact power_sales@cree.com

RoHS, REACH, and Halogen-Free compliant

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