CREE POWER PRODUCTS | 2015

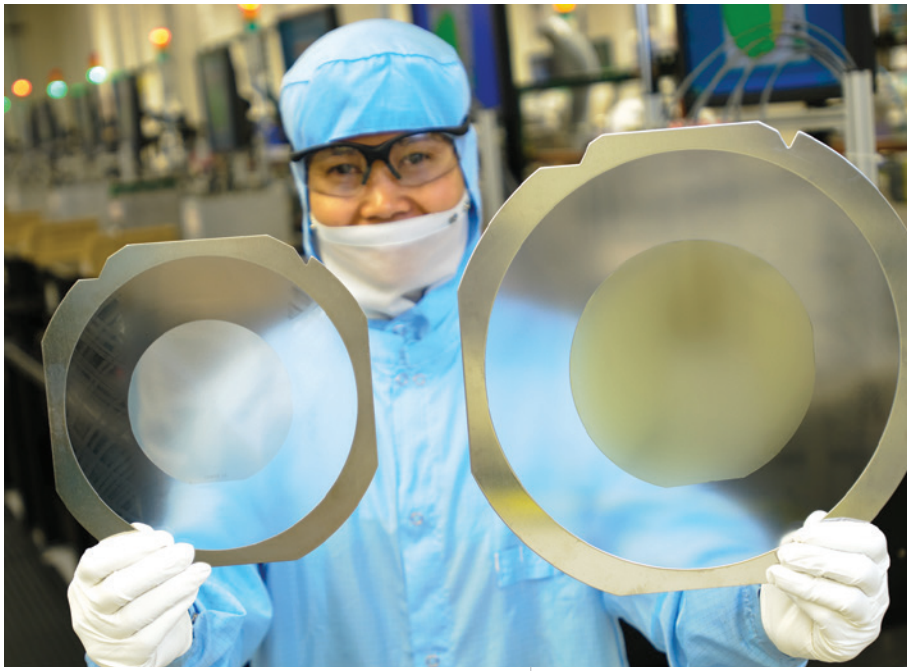
CREE

Cree® SiC

HIGH FREQUENCY FOR HIGH POWER.
SMALLER. COOLER. BETTER.

Industry-leading technology and service. That's why Cree® should be your power semiconductor partner.

Why Cree®? Because Cree has a foundation that no one can match—the reasons are clear.



Vertically integrated with an unprecedented command of its material supply, Cree is committed to investing in and expanding its current infrastructure and manufacturing capacity to support the SiC power revolution. Our goal is to provide the industry's best performing power devices at the best value for all applications.

Industry-leading power products and dedicated SiC material supply are the result of Cree's long history, expertise and intellectual property portfolio in the power semiconductor world. As the SiC market leader and the first company to produce 75mm, 100mm and now 150mm SiC wafers, Cree has the unique position of producing most of the world's SiC wafers used today.

Built to outperform silicon products and competitors' wide band gap devices, Cree's quality devices have established themselves in power supply and solar inverter markets worldwide with more than 1 trillion device hours in the field. Producing the best power semiconductor is not enough. Customers need tools to help understand how to take full advantage of SiC in end applications. That is why we are passionate about providing valuable tools for our customers. We offer the most accurate SiC SPICE models as well as reference designs and application notes to reduce development efforts and speed up time-to-market. Our success depends on the success of our loyal customers.

Cree has a commitment to continued product innovation and expansion of infrastructure. The development of the industry's first 150mm SiC wafer and investment in new fab capacity demonstrates why Cree is a leader in silicon carbide.

2002
First 600V commercial SiC JBS Schottky diode

2006
First 1200V SiC Schottky diode

2007
Cree converts to 100mm SiC wafers—increasing yields and decreasing cost

2010
First 1700V SiC Schottky diodes

Cree demonstrates first 150mm SiC wafer

2011
First 1200V SiC MOSFET

2012
Cree introduces the first commercially available and fully-qualified 1200V SiC half-bridge module

2014
First 1700V SiC half-bridge module

Cree introduces 1200V SiC 25mΩ MOSFET on Gen2 Technology

FROM UTILITY SCALE TO MICRO-INVERTER, CREE® SiC ENABLES BETTER POWER CONVERTERS.

Higher switching frequency creates designs that are smaller, lighter and lower cost.

IGBT-based 10kW solar inverter with forced air cooling

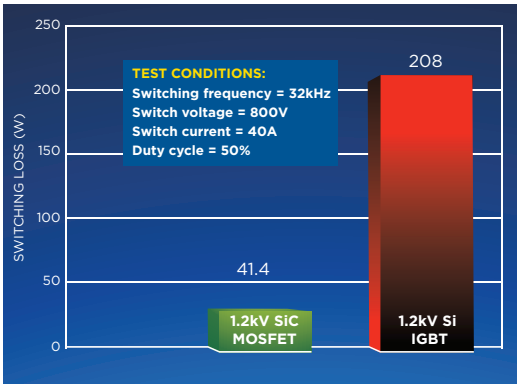
Derated to >45°C ambient

Cree SiC MOSFET 10kW solar inverter with passive cooling

No derating up to 55°C ambient

Don’t compromise.

SiC vs. IGBT Switching Loss



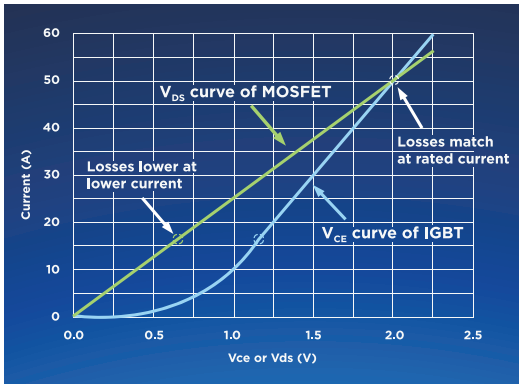
Lower switching losses

The lower switching losses are the result of Cree’s revolutionary Gen 2 silicon carbide technology. These 1200V and 1700V MOSFETs deliver industry-leading power density and switching efficiency at half the cost-per-amp of Cree’s previous generation MOSFETs.

Competitive Device: 1200V IGBT 80A @ T_C=25˚C
Cree® Device: C2M0025120D 90A @ T_C=25˚C

Test Conditions:
- Switching Frequency = 32kHz
- Switch Voltage = 800V
- Switch Current = 40A
- Duty cycle = 50%

SiC vs. IGBT Conduction Loss



Cree C2M0025120D
1200V 25mΩ MOSFET

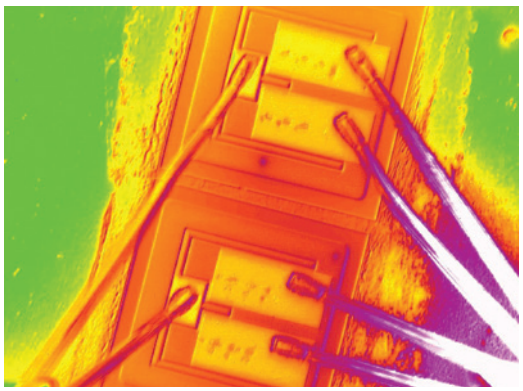
Lower conduction losses

Much lower conduction losses than you would expect.

From the figure on the left, you can see at the rated current (50A) the forward voltage drop of the Cree 25mΩ MOSFET is equal to the IGBT.

However, at the normal operating point of most applications, the curve of an IGBT behaves more like a PIN diode while the MOSFET acts more like a true resistor. This results in much lower conduction losses in real applications.

Easy to parallel



Greater design flexibility

Cree is offering engineers greater flexibility to meet their design targets. Cree SiC MOSFETs have positive temperature coefficients so they can be easily paralleled to achieve higher power levels. On the left is a thermal image illustrating the balanced current sharing even when connecting two mis-matched 1200V 80mΩ devices in parallel. With an increasing portfolio of options, the possibilities are endless.

Static Drain Current (A)	Left MOSFET $R_{DS(on)}$ = 66mΩ	Right MOSFET $R_{DS(on)}$ = 90mΩ	MOSFET ΔT
20	93.0°C	91.7°C	1.3°C

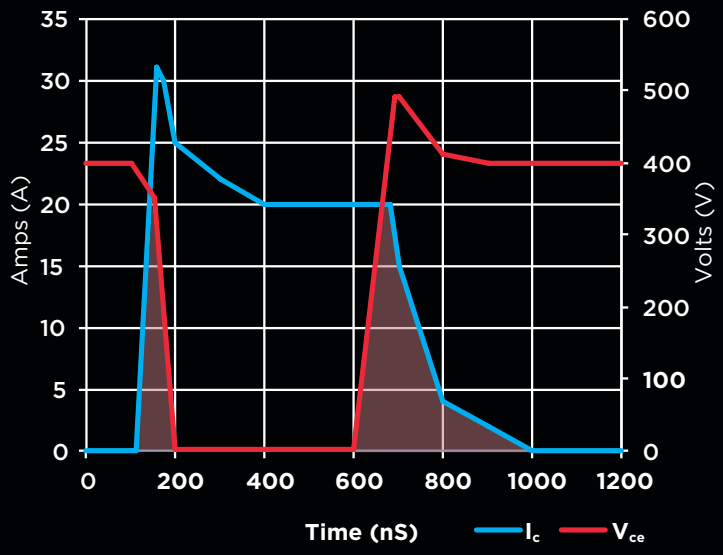
The Cree® SiC MOSFET

HIGH FREQUENCY FOR HIGH POWER SMALLER. COOLER. BETTER.

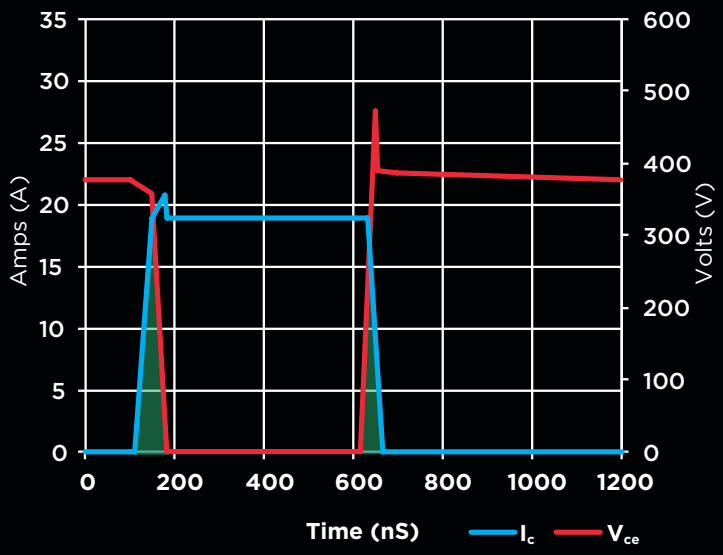
	1700V		1200V					900V
$R_{DS(on)}$	40mΩ	1Ω	25mΩ	40mΩ	80mΩ	160mΩ	280mΩ	65mΩ
$I_{D(MAX)}$	60A	3A	90A	60A	36A	19A	10A	38A
Commercially Released		●	●	●	●	●	●	
New for 2015	●							●

NEW 900V TECHNOLOGY

IGBT+Si FRD



Cree MOSFET + Z-Rec® Diodes

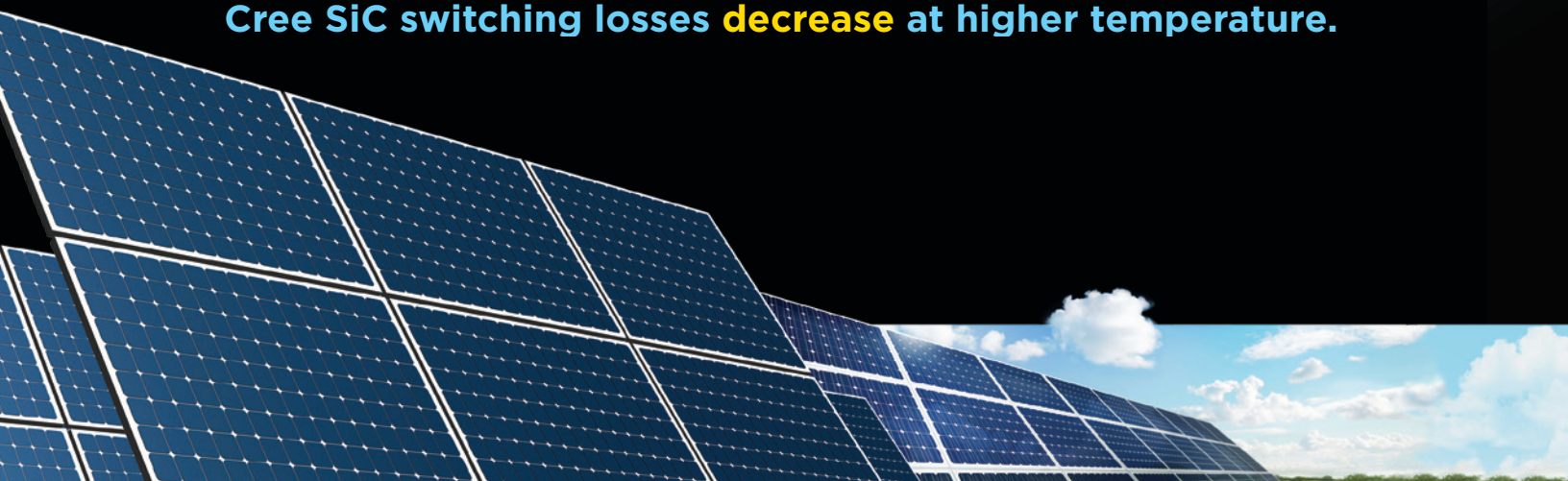


IGBT + Si Fast Recovery Diode → +10% to + 25%

T_j = 25°C → $E_{on} + E_{off}$ → T_j = 150°C

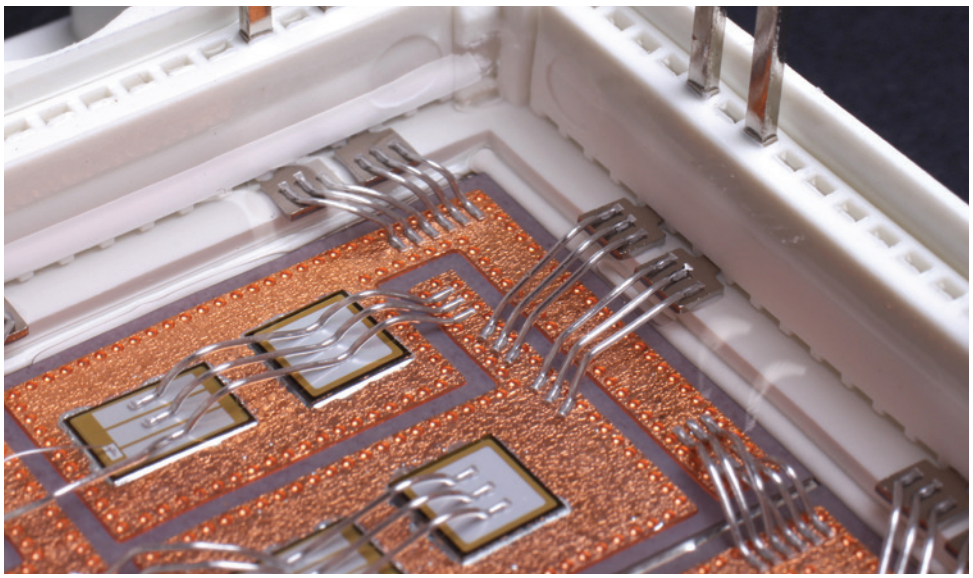
Cree MOSFET+ Z-Rec Diode → -8% to - 25%

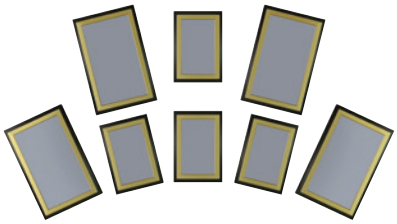
Cree SiC switching losses decrease at higher temperature.



Cree® Z-Rec® Schottky diodes deliver the industry's best silicon carbide performance, efficiency and product range.

With the industry's largest silicon carbide product portfolio, Cree Z-Rec SiC Schottky diodes provide solutions for many power applications in a wide range of packages, voltages and amperages that deliver the industry's highest SiC blocking voltage and switching frequency capability. Cree's unique design advantages include a unipolar construction that eliminates turn-off switching losses, a junction barrier that minimizes leakage current at high voltage and a merged PIN design to enable extremely high surge current capability. Enhance your designs with the industry's most innovative power devices.





CREE SiC BARE DIE FOR POWER MODULES

Take advantage of the ultra low loss, high-frequency operation, zero reverse recovery current, ultra fast switching and positive temperature coefficient with bare-die Cree SiC diodes and MOSFETs.

Cree's bare die power devices (MOSFETs and Schottky diodes) bring the advantages of SiC material to power modules and microelectronic assemblies. Motor drives, solar and wind power inverters, switchmode power supplies, UPS and induction heating applications will benefit from the performance, efficiency and reliability of silicon carbide.

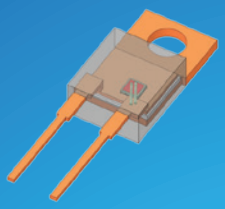
Unprecedented power handling capability

Cree's 5th generation of Z-Rec diodes are designed to deliver the cost reduction, high efficiency, system simplicity and improved reliability of SiC technology to high power systems from 50kW to 1MW and higher, enabling a new generation of high performance power modules and power electronic systems.

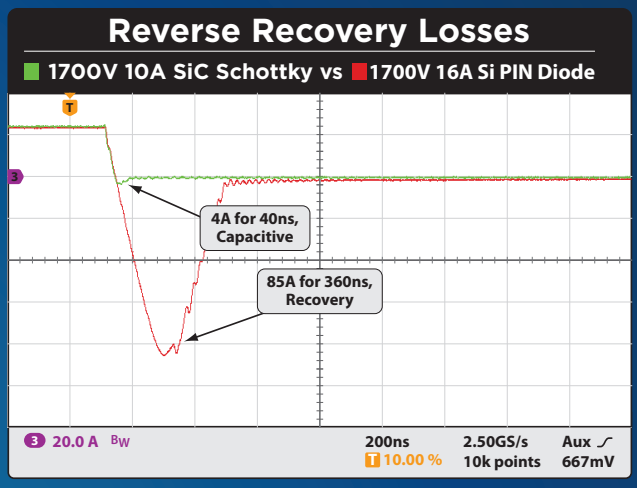
Developed to facilitate the direct matching of 50 Amp diodes to 50 Amp MOSFETs or IGBTs, the CPW5 family of diodes can simplify designs by replacing multiple lower-power diodes with a single CPW5 rectifier. Plus, unlike silicon diodes, these SiC diodes can be placed in parallel for higher power levels than ever before.

TO-220-isolated diodes provide advanced isolation without sacrificing device performance

To avoid inserting an external isolating sheet between diode and heat sink, designers will often choose the isolated Full-PAK package for their diodes, sacrificing high-temperature performance.



Cree's new SiC Schottky diodes in an internally isolated TO-220 package deliver 2.5kV of isolation without the reduced performance of a Full-PAK. Available with 650V blocking and 6A, 8A, and 10A forward current rating, these diodes ease design, reduce cost, and support efficient manufacturing.



Cree SiC Schottky diodes achieve zero reverse recovery, virtually eliminating diode switching losses and reducing overall system losses and EMI, while improving reliability.

CREE® Z-REC® SCHOTTKY DIODES

600V: 1-20A
650V: 2-50A
1200V: 2-50A
1700V: 10-50A

QFN 

TO-263 

TO-252 

TO-220 

TO-220 Full-PAK 

TO-247 

CREE Z-REC SCHOTTKY DIODES:

- Improve system efficiency
- Reduce system size
- Increase system reliability
- Simplify designs/circuitry
- Shorten design cycles
- Provide high frequency switching
- Reduce switching losses
- Improve EMI signatures
- Lower system cost

SiC MODULES FOR EVERY POWER LEVEL

"The drop-in feature of Cree's new all-SiC power modules allows us to achieve 99 percent efficiency while reducing the power module count by a factor of 2.5 in our existing HF induction heating systems."

—John K. Langelid, R&D Manager, EFD Induction

10kW Boost Inverter

31mm Family NEW

Compatible with Flow0
1200V / 5 – 30kW

New for 2015! Compact yet powerful – this is the latest addition to Cree's family of all-SiC modules. The 31mm housing is a low inductance design optimized for high-frequency applications such as solar boosters.

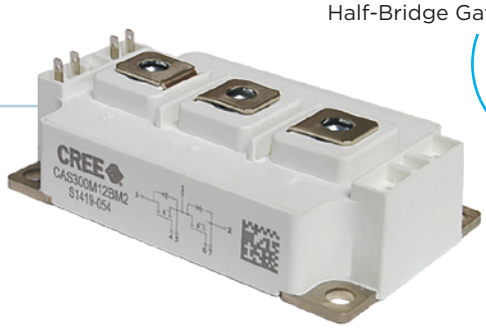
Six-Pack Gate Driver

45mm Family

Compatible with EconoPack™ 2
1200V / 5 – 40kW

Our award winning all-SiC family of modules in an industry standard 45mm footprint allows engineers to take advantage of the benefits of SiC (such as 5x lower switching losses) without significant redesign. Increase the power rating of your 3-phase inverters while reducing power losses. A Cree®-designed six-pack gate driver/evaluation board is available for purchase, or download the full reference design.

Half-Bridge Gate Driver



62mm Family

Compatible with SEMITRANS® 3
1200V, 1700V / 30 – 250kW

All SiC half-bridge modules bring SiC into the megawatt class of applications in a commonly-used 62mm package that is easy to implement and evaluate in existing systems. With 5-7x lower switching losses than equivalent IGBT modules, applications such as induction heating, central solar inverters and AFE motor drives can achieve higher power density and efficiencies up to 99 percent. Supporting SiC commercial gate drivers are available for purchase, or download Cree's reference design to implement your own solution.

DESIGN TOOLS AND SUPPORT

Design Tools

- Reference Designs
- SPICE Models
- Gate Driver Boards

Technical Documentation

- Application Notes
- White Papers
- Technical Articles

Learn More

- Ask an Expert
- Instructional Videos

www.cree.com/power/tools

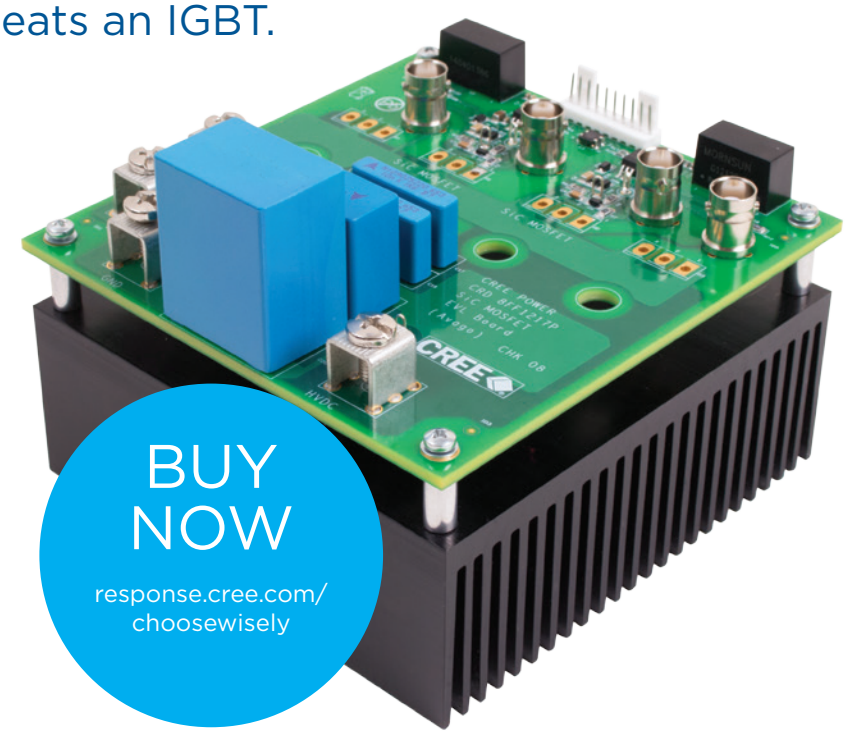
See how a Cree® MOSFET beats an IGBT.

Quickly evaluate Cree SiC MOSFETs and diodes in power converter topologies up to 25kW.

Learn how to optimize a Cree MOSFET solution for EMI, ringing and drive requirements.

Compare and evaluate Cree MOSFET performance vs IGBT.

Includes (2) 1200V 80mΩ SiC MOSFETs & (2) 1200V/20A SiC Schottky diodes, plus testing hardware.



BUY NOW

response.cree.com/choosewisely

CREE® POWER PRODUCT SELECTOR GUIDE

Silicon Carbide Power Modules

Part Number	V_{DSS} (V)	$R_{DS(ON)}$ (T_J=25°C) (mΩ) Typ	Max	$R_{DS(ON)}$ (T_J=150°C) (mΩ) Typ	Max	E_{SW} Total (mJ) (T_j=150°C)	I_{D} (T_c=90°C) (A) (Continuous)	Package Type
CCS050M12CM2	1200	25	34	43	63	1.7	59	45 x 108
CCS020M12CM2	1200	80	98	150	208	0.48	20	45 x 108
CAS120M12BM2	1200	13	16	23	30	2.1	138	62 x 106
CAS300M12BM2	1200	5	5.7	8.6	9.8	12	285	62 x 106
CAS300M17BM2	1700	8	10	16.2	20	23.7	225	62 x 106

Silicon Carbide MOSFET

Part Number	V_{DSS} (V)	$R_{DS(ON)}$ (T_J=25°C) (mΩ) Typ	Max	$R_{DS(ON)}$ (T_J=150°C) (mΩ) Typ	Max	E_{SW} Total (µJ) (T_j=150°C)	I_{D} (T_c=100°C) (A) (Continuous)	Package Type
NEW C3M0065090J	900	65		90			25	7L D2PAK
NEW C3M0065090A	900	65		90			25	TO-220-3
NEW C3M0065090D	900	65		90			25	TO-247-3
C2M0025120D	1200	25	34	43	63	1700	60	TO-247-3
C2M0040120D	1200	40	52	84	100	1400	40	TO-247-3
C2M0080120D	1200	80	98	150	208	400	20	TO-247-3
C2M0160120D	1200	160	196	290	400	140	11	TO-247-3
C2M0280120D	1200	280	370	530	650	70	6	TO-247-3
C2M1000170D	1700	1000	1400	2100	3200	15	3	TO-247-3

Silicon Carbide Bare Die MOSFET

Part Number	V_{DSS} (V)	$R_{DS(ON)}$ (T_J=25°C) (mΩ) Typ	Max	$R_{DS(ON)}$ (T_J=150°C) (mΩ) Typ	Max	E_{SW} Total (µJ) (T_j=150°C)	I_{D} (T_c=100°C) (A) (Continuous)	Die Size (mm)
CPM2-1200-0025B	1200	25	34	43	63	1700	60	4.04 x 6.44
CPM2-1200-0040B	1200	40	52	84	100	1400	40	3.10 x 5.90
CPM2-1200-0080B	1200	80	98	150	208	400	20	3.10 x 3.36
CPM2-1200-0160B	1200	160	196	290	400	140	11	2.39 x 2.63

Cree Z-Rec® SiC Schottky Diodes

Part Number	V_{RRM} (V)	I_F (A) (rated)	I_F (A) (T_c=135°C)	V_{F} (T_J=25°C) Typ	Max	V_{F} (T_J=175°C) Typ	Max	Q_c (nC)	Package Type
CSD01060A	600	1	2	1.6	1.8	2	2.4	3.3[2]	TO-220-2
CSD01060E	600	1	2	1.6	1.8	2	2.4	3.3[2]	DPAK
C3D1P7060Q	600	1.7	3	1.5	1.7	1.8	2.4	4.4[1]	QFN 3.3
C3D02060A	600	2	4	1.5	1.7	1.8	2.4	4.8[2]	TO-220-2
C3D02060E	600	2	4	1.5	1.7	1.8	2.4	4.8[2]	DPAK
C3D02060F	600	2	1.8	1.5	1.7	1.8	2.4	4.8[2]	Full-Pak
C3D03060A	600	3	5.5	1.5	1.7	1.8	2.4	6.7[2]	TO-220-2
C3D03060E	600	3	5.5	1.5	1.7	1.8	2.4	6.7[2]	DPAK
C3D03060F	600	3	2.2	1.5	1.7	1.8	2.4	6.7[2]	Full-Pak
C3D04060A	600	4	7.5	1.5	1.7	1.8	2.4	8.5[2]	TO-220-2
C3D04060E	600	4	7.5	1.5	1.7	1.8	2.4	8.5[2]	DPAK
C3D04060F	600	4	2.6	1.5	1.7	1.8	2.4	8.5[2]	Full-Pak
C3D06060A	600	6	8.5	1.6	1.8	1.9	2.4	16[2]	TO-220-2
C3D06060G	600	6	9.5	1.6	1.8	1.9	2.4	16[2]	D²PAK
C3D06060F	600	6	3.3	1.6	1.8	1.9	2.4	16[2]	Full-Pak
C3D08060A	600	8	11	1.6	1.8	1.9	2.4	21[2]	TO-220-2
C3D08060G	600	8	11	1.6	1.8	1.9	2.4	21[2]	D²PAK
C3D10060A	600	10	14	1.5	1.8	2	2.4	25[2]	TO-220-2
C3D10060G	600	10	14	1.5	1.8	2	2.4	25[2]	D²PAK
C3D16060D	600	16	22	1.6	1.8	1.9	2.4	42[2]	TO-247-3
C3D20060D	600	20	28	1.5	1.8	2	2.4	50[2]	TO-247-3
C3D02065E	650	2	4	1.5	1.8	1.8	2.4	4.8[2]	DPAK
C3D03065E	650	3	5.5	1.5	1.8	1.8	2.4	6.7[2]	DPAK
C3D04065A	650	4	7.5	1.5	1.8	1.8	2.4	8.5[2]	TO-220-2
C3D04065E	650	4	7.5	1.5	1.8	1.8	2.4	8.5[2]	DPAK

Cree Z-Rec® SiC Schottky Diodes (cont.)

Part Number	V_{RRM} (V)	I_F (A) (rated)	I_F (A) (T_C=135°C)	$V_{F\ (T_J=25°C)}$ Typ	$V_{F\ (T_J=25°C)}$ Max	$V_{F\ (T_J=175°C)}$ Typ	$V_{F\ (T_J=175°C)}$ Max	Q_c (nC)	Package Type
C3D06065A	650	6	8.5	1.6	1.8	1.9	2.4	16[2]	TO-220-2
C3D06065E	650	6	8.5	1.6	1.8	1.9	2.4	16[2]	DPAK
C3D06065I	650	6	8.5	1.6	1.8	1.9	2.4	16[2]	TO-220-Iso
C3D08065A	650	8	11	1.6	1.8	1.9	2.4	21[2]	TO-220-2
C3D08065E	650	8	11	1.6	1.8	1.9	2.4	21[2]	DPAK
C3D08065I	650	8	7	1.5	1.8	2	2.4	21[2]	TO-220-Iso
C3D10065A	650	10	14	1.5	1.8	2	2.4	25[2]	TO-220-2
C3D10065E	650	10	14	1.5	1.8	2	2.4	25[2]	DPAK
C3D10065I	650	10	8.5	1.5	1.8	2	2.4	25[2]	TO-220-Iso
C3D16065D	650	16	22	1.6	1.8	1.9	2.4	42[2]	TO-247-3
CVFD20065A	650	20	26	1.35	1.45	1.65	1.8	62[1]	TO-220-2
C3D20065D	650	20	28	1.5	1.8	2	2.4	50[2]	TO-247-3
C5D50065D	650	50	50	1.5	1.8	1.8	2.2	110[1]	TO-247-3
C4D02120A	1200	2	6	1.4	1.8	1.9	3.0	11[3]	TO-220-2
C4D02120E	1200	2	7	1.4	1.8	1.9	3.0	11[3]	DPAK
C4D05120A	1200	5	8	1.4	1.8	1.9	3	28[3]	TO-220-2
C4D05120E	1200	5	9	1.4	1.8	1.9	3	28[3]	DPAK
C4D08120A	1200	8	11	1.5	1.8	2.2	3	37[3]	TO-220-2
C4D08120E	1200	8	12	1.5	1.8	2.2	3	37[3]	DPAK
C4D10120A	1200	10	14	1.5	1.8	2.2	3	51[3]	TO-220-2
C4D10120D	1200	10	18	1.4	1.8	1.9	3	56[3]	TO-247-3
C4D10120E	1200	10	16	1.5	1.8	2.2	3	51[3]	DPAK
C4D15120A	1200	15	20	1.6	1.8	2.3	3	78[3]	TO-220-2
C4D20120A	1200	20	25.5	1.5	1.8	2.2	3	99[3]	TO-220-2
C4D20120D	1200	20	33	1.5	1.8	2.2	3	102[3]	TO-247-3
C4D30120D	1200	30	43	1.5	1.8	2.2	3	156[3]	TO-247-3
C4D40120D	1200	40	54	1.5	1.8	2.2	3	198[3]	TO-247-3
C3D10170H	1700	10	14.5	1.7	2	3	3.5	76[5]	TO-247-2
C3D25170H	1700	25	26	1.8	2.5	3.2	4	182[5]	TO-247-2

Cree® Z-Rec® SiC Schottky diodes - Bare Die

Part Number	V_{RRM} (V)	I_F (A) (rated)	$V_{F\ (T_J=25°C)}$ Typ	$V_{F\ (T_J=25°C)}$ Max	$V_{F\ (T_J=175°C)}$ Typ	$V_{F\ (T_J=175°C)}$ Max	Q_c (nC)	Die Size (mm)
CPWR-0600-S001B	600	1	1.6	1.8	2	2.4	3.3[2]	1.07 x 0.66
CPW3-0600-S002B	600	2	1.5	1.8	1.8	2.4	4.8[2]	1.07 x 0.66
CPW3-0600-S003B	600	3	1.5	1.8	1.8	2.4	6.7[2]	1.07 x 0.92
CPW3-0600-S004B	600	4	1.5	1.8	1.8	2.4	8.5[2]	1.13 x 1.13
CPW2-0600-S006B	600	6	1.6	1.8	1.9	2.4	16[2]	1.55 x 1.55
CPW2-0600-S008B	600	8	1.6	1.8	1.9	2.4	21[2]	1.77 x 1.77
CPW2-0600-S010B	600	10	1.5	1.8	2	2.4	25[2]	1.92 x 1.92
CPW3-0650-S004B	650	4	1.5	1.8	1.8	2.4	8.5[2]	1.13 x 1.13
CPW2-0650-S006B	650	6	1.6	1.8	1.9	2.4	16[2]	1.55 x 1.55
CPW2-0650-S008B	650	8	1.6	1.8	1.9	2.4	21[2]	1.77 x 1.77
CPW2-0650-S010B	650	10	1.5	1.8	2	2.4	25[2]	1.92 x 1.92
CPW5-0650-Z030B	650	30	1.6	1.7	2.2	2.5	65[1]	2.80 x 2.80
CPW5-0650-Z050B	650	50	1.5	1.8	1.8	2.2	110[1]	3.50 x 3.50
CPW4-1200-S002B	1200	2	1.4	1.8	1.9	3	11[3]	1.18 x 1.18
CPW4-1200-S005B	1200	5	1.4	1.8	1.9	3	28[3]	1.69 x 1.69
CPW4-1200-S008B	1200	8	1.5	1.8	2.2	3	37[3]	2.00 x 2.00
CPW4-1200-S010B	1200	10	1.5	1.8	2.2	3	51[3]	2.26 x 2.26
CPW4-1200-S015B	1200	15	1.6	1.8	2.3	3	78[3]	2.70 x 2.70
CPW4-1200-S020B	1200	20	1.5	1.8	2.2	3	99[3]	3.08 x 3.08
CPW5-1200-Z050B	1200	50	1.6	1.8	2.3	2.7	246[3]	4.90 x 4.90
CPW3-1700-S010B	1700	10	1.7	2	3	3.5	96[5]	3.78 x 2.68
CPW3-1700-S025B	1700	25	1.8	2	3.2	4	170[5]	5.70 x 3.94
CPW5-1700-Z050B	1700	50	1.6	1.9	2.5	2.8	370[4]	6.00 x 6.00

[1] at V_R=400V; [2] at V_R=600V; [3] at V_R=800V; [4] at V_R=1100V; [5] at V_R=1200V

Cree SiC Modules

CAS 120 M 12 B M 2

- Switch Generation
- Switch Type
- Housing
- Voltage Rating Per Switch
- Diode Current (H = Half, M = Marked Current)
- Current Per Switch
- Three Digit Series

Cree Z-FET™ SiC MOSFETs: Bare die

CPM2-1200-0025 B

- Metal
- $R_{DS(ON)}$ (mΩ)
- Voltage Rating
- Four Digit Series

Cree Z-FET SiC MOSFETs

C2M 0080 120 D

- Package Code
- Voltage Rating
- $R_{DS(ON)}$ (mΩ)
- Three Digit Series

Cree Z-Rec SiC diodes: Bare die

CPW5-1700-Z 050 B

- Top Metal
- Amperage Rating
- Aspect Ratio (Z= Square, Y=Rectangular)
- Voltage Rating
- Four Digit Series

Cree Z-Rec SiC diodes

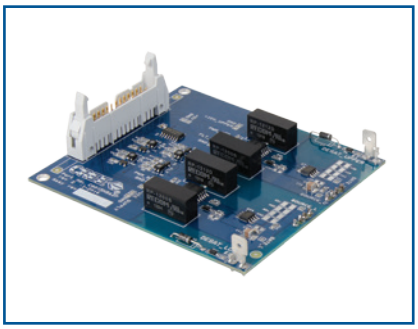
C4D 05 120 E

- Package Code
- Voltage Rating
- Amperage Rating
- Three Digit Series

Cree® SiC Reference Designs and Evaluation Boards

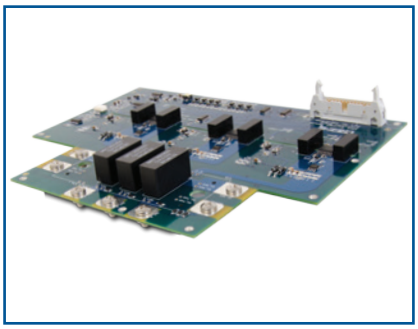
Reduce design-cycle time and create rugged and reliable system designs with these useful reference designs demonstrating proper design techniques when implementing Cree SiC products.

These boards are available for purchase.



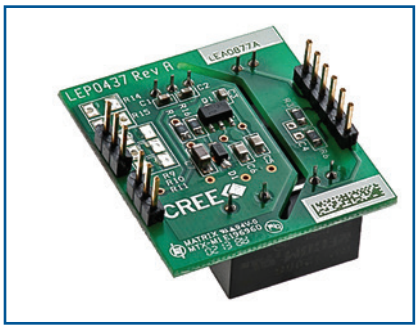
Half-Bridge Gate Driver CGD15HB62P

- Cree designed dual-channel half-bridge gate driver
- 1200V maximum
- Optimized for CAS300M12BM1
- Includes Desat and UVLO protection
- For engineering evaluation purposes
- Full reference design files available



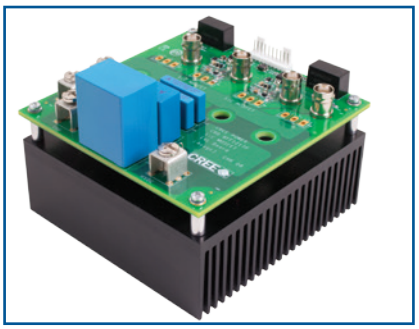
Six-Pack Gate Driver CGD15FB45P

- Cree designed 6-Pack gate driver
- Optimized for Cree's CCSxxxM12CM2 power modules
- 1200V maximum
- Includes Desat and UVLO
- For engineering evaluation purposes
- Full reference design files available



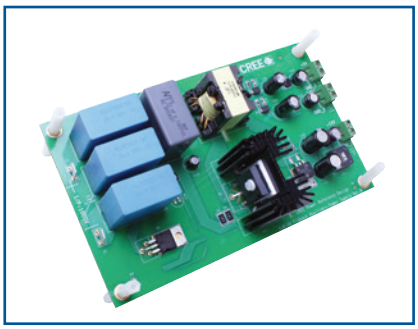
Universal Gate Driver CRD-001

- Cree designed universal gate driver for all C2M™ SiC MOSFETs
- Supports 1200V or 1700V MOSFETs
- Compatible with 1W and 2W DC-DC converters
- For engineering evaluation purposes
- Full reference design files available



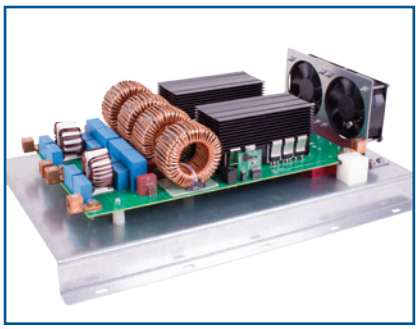
Silicon Carbide Discrete Evaluation Board KIT8020-CRD-8FF1217-1

- Universal evaluation board for SiC MOSFETs and diodes
- Includes easy access to critical test points, such as V_{GS}, V_{DS} and I_{DS}
- Provides a good layout example for properly driving MOSFETs and diodes with minimal ringing
- Reference design includes a schematic, mechanical drawing and BOM



CRD060DD12P 60W Auxiliary Power Supply with C2M™ MOSFET

- 60W single-end HV flyback design, based on Cree's 1700V, 1 Ohm MOSFET
- V_{in} = 200-1000V, V_{out} = 12V/4.5A, 5V/0.5A, -12V/0.25A
- Reference design includes BOM, schematic, transformer spec, applications note, design files, and Powerpoint® presentation
- Presentation contains efficiency calculations, thermal images, and sample waveforms



50kW Boost Converter

- SiC MOSFET-based converter for PV applications
- 4-phase interleaved
- V_{in} = 400-600V, V_{out} = 800V
- Reference design includes schematic and detailed Powerpoint presentation
- Presentation includes efficiency calculations, thermal images, and sample waveforms

CREE

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