



Discrete Power Semis and Modules Article Archive

This document is a list of articles about discrete power semiconductors and power semiconductor modules published in the How2Power Today newsletter. Products listed here include:

- Power MOSFETs
- IGBTs
- SCRs/thyristors
- Diodes and rectifiers
- Power MOSFET modules
- IGBT modules
- Intelligent power modules
- Gate driver + MOSFET modules

Products are listed here using the following format:

Issue date:

Article title, Part number/product name

[For more details...](#)(link to article)

For articles on power ICs, see the Power ICs Article Archives—one lists products by issue and the other by part number.

January 2024:

SiC MOSFET Half-Bridge Modules Are Engineered For Reliability, SemiQ's GCMX010A120B2B1P and other SiC MOSFET modules

[For more details...](#)

SiC MOSFET Half-Bridge Module Is Hermetically Sealed, Solitron Devices' SD11487 SiC power module

[For more details...](#)

Low-Voltage HEMTs Come In Easy-To-Use Flip-Chip QFNs, Innoscience Technology's INN040FQ043A, INN100FQ016A, INN100FQ025A, INN150FQ032A, and INN150FQ070A GaN HEMTs

[For more details...](#)

GaN FETs With Integrated Gate Drivers Shrink AC-DC Adapters, Texas Instruments' LMG3622, LMG3624 and LMG3626 GaN FETs

[For more details...](#)

February 2024:

Discrete Power Semis and Modules Article Archive

100-V Bidirectional GaN IC For 48-V And 60-V Battery Management Systems, Innoscience Technology's INV100FQ030A member of the company's VgAN IC family

[For more details...](#)

1200-V SiC MOSFETs Target Industrial Applications, Nexperia's NSF040120L3A0 and NSF080120L3A0 SiC MOSFETs

[For more details...](#)

March 2024:

GaN FET Features 1-m Ω On-Resistance, EPC's EPC2361GaN FET

[For more details...](#)

SiC MOSFET Modules In Full-Bridge Configurations Delivery High Efficiency And Reliability, SemiQ's QSiC 1200-V SiC MOSFET modules

[For more details...](#)

Trench MOS Schottky Barrier Diodes Achieve Low Reverse-Recovery Time, ROHM Semiconductor's YQ series 100-V breakdown SBDs

[For more details...](#)

April 2024:

2000-V SiC MOSFETs Support Higher DC Link Voltages, Infineon Technologies' 2000-V CoolSiC MOSFETs

[For more details...](#)

IGBT Power Modules In Industry-Compatible Package Address A Range Of Application Requirements, Vishay Intertechnology's VS-GT100TS065S and other IGBT power modules

[For more details...](#)

IGBT-Based IPMs Reduce Energy Consumption In Heating And Cooling, onsemi's 1200-V SPM31 intelligent power modules

[For more details...](#)

750-V SiC MOSFETs Enhance Performance Of Industrial And Automotive Applications, Infineon Technologies' 750-V G1 discrete CoolSiC MOSFETs

[For more details...](#)

100-V Trench Schottky Rectifiers Boost Power Supply Efficiency,

Discrete Power Semis and Modules Article Archive

STMicroelectronics' 100-V Schottky diodes including 28 variants such as the STPST1H100ZF

[For more details...](#)

May 2024:

GaN Power Stage IC Is Rad Hard, EPC Space's EPC7011L7SH GaN power stage

[For more details...](#)

IC Drives Low-, Medium- And High-Voltage E-mode GaN HEMTs, Innoscience Technology's INS1001DE driver IC

[For more details...](#)

June 2024:

400-V SiC MOSFETs Benefit AI Server Power Supplies, Infineon's 400-V CoolSiC MOSFETs

[For more details...](#)

SiC JFET Brings Efficiency, Small Size And Robustness To Circuit Breakers, Qorvo's UJ4N075004L8S SiC JFET

[For more details...](#)

Known-Good-Die Screening For SiC MOSFETs, SemiQ's known-good-die (KGD) screening process and additions to QSiC family of MOSFET half-bridge modules

[For more details...](#)

July 2024:

IGBT Modules Simplify Design And Reduce Costs For Renewable Energy Applications, onsemi's NXH800H120L7QDSG and SNXH800H120L7QDSG power modules

[For more details...](#)

GaN Power IC Packages Deliver Enhanced Thermal Performance, Cambridge GaN Devices' BHDFN-9-1 and DHDFN-9-1 packages

[For more details...](#)

50-V GaN FET Enables High Power Density In USB-C PD Applications, EPC's 50-V, 8.5-m Ω EPC2057 GaN FET

[For more details...](#)

Discrete Power Semis and Modules Article Archive

650-V SiC Diodes Address Automotive And Wider Range Of Industrial Applications, Nexperia's 650-V, 10-A SiC Schottky diodes are automotive qualified (PSC1065H-Q) and available in real-two-pin DPAK packaging

[For more details...](#)

Silicon And SiC MOSFETs Support High Efficiency In Data Centers, onsemi's latest generation T10 PowerTrench family and EliteSiC 650-V MOSFETs

[For more details...](#)

1200-V SiC Schottky Diodes Increase Efficiency And Reliability, Vishay Intertechnology's 16 Gen 3 1200-V SiC Schottky diodes featuring a merged PIN Schottky design

[For more details...](#)

August 2024:

GaN IPM Enables Smaller, More Efficient High-Voltage Motors, Texas Instruments' DRV7308 GaN IPM

[For more details...](#)

Ultra- And Hyperfast Recovery Rectifiers For Automotive, Nexperia's 650-V ultra- and hyperfast recovery rectifiers in D2PAK Real-2-Pin packaging

[For more details...](#)

September 2024:

650-V GaN Switches And Half-Bridges Feature Integrated Drivers, Infineon Technologies' CoolGaN Drive product family

[For more details...](#)

Hybrid Si/SiC Power Modules Boost Power Density For Solar Power Generation And Energy Storage, Onsemi's newest generation silicon and silicon carbide hybrid power integrated modules (PIMs) in F5BP packages

[For more details...](#)

October 2024:

1200-V SiC MOSFETs Promise Greater Ruggedness And Reliability, NoMIS Power's N3T080MP120D and N3T035MP120D SiC MOSFETs

[For more details...](#)

Discrete Power Semis and Modules Article Archive

135-V And 150-V MOSFETs Enable Higher Efficiency In Drives And SMPSs,
Infineon Technologies' OptiMOS 6 MOSFETs

[For more details...](#)

**240-V, 1-kA Bidirectional Power TVS Diode Comes In Surface-Mount
Package,** *Bourns' model PTVS1-240C-M PTVS*

[For more details...](#)

SiC Power MOSFET Technology Is Tailored For EV Traction Inverters,
STMicroelectronics' fourth-generation STPOWER silicon carbide MOSFET technology

[For more details...](#)

40-V MOSFETs For Automotive Motors And Low-Power Control Systems,
*Magnachip Semiconductor's AMDV040N029LVRH, AMDV040N036LVRH,
AMDV040N042LVRH and AMDV040N048VRH MXT MV MOSFETs in PDFN 33
packages*

[For more details...](#)

Automotive-Qualified Small-Signal MOSFETs In Tiny DFNs, *Nexperia's single
and dual small-signal MOSFETs in the DFN1110D-3 and DFN1412-6*

[For more details...](#)

November 2024:

2000-V SiC Schottky Diodes Raise Efficiency For DC Link Systems, *Infineon
Technologies' CoolSiC Schottky diode 2000-V G5 family*

[For more details...](#)

GaN Power ICs Drive Ease-Of-Use, Lower System Cost And Energy Savings,
Navitas Semiconductor's GaNSlim ICs

[For more details...](#)

High-Current-Density Power Modules Support AI Computing, *Infineon
Technologies' TDM2354xD and TDM2354xT dual-phase power modules*

[For more details...](#)

January 2023:

900-V GaN Power ICs Feature Low On-Resistance And Low Leakage,
GaNPower International's GPI4TIC15DFV and GPI6TIC15DFV GaN ICs

[For more details...](#)

Discrete Power Semis and Modules Article Archive

Latest-Gen 150-V MOSFET Is Optimized For Light Electric Vehicles,
Magnachip Semiconductor's MDT15N054PTRH 150-V MXT MOSFET

[For more details...](#)

March 2023:

High-Performance Vertical GaN Semiconductors Will Begin Production In Q3,
NexGen Power Systems' 700-V and 1200-V NexGen Vertical GaN semiconductor devices

[For more details...](#)

April 2023:

SiC FET In TOLL Package Offers Higher Voltage Rating, Lower On-Resistance,
Qorvo's UJ4SC075005L8S SiC FET

[For more details...](#)

600-V FREDs Deliver High Efficiency And Improved Thermal Performance,
Taiwan Semiconductor's PUUPxJ series FREDs

[For more details...](#)

Application-Specific MOSFETs For Hotswap Reduce Footprint,
Nexperia's PSMN1R9-100SSE and PSMN2R3-100SSE 80-V and 100-V application specific MOSFETs (ASFETs)

[For more details...](#)

Integrated 100-V GaN Half-Bridge With Driver Saves Board Space,
Innoscence Technology's ISG3201 SolidGaN half-bridge

[For more details...](#)

May 2023:

Smart High-Side Switches Protect Sensitive ADAS Loads And The Power Distribution System,
Infineon Technologies' PROFET Load Guard 12-V power switches

[For more details...](#)

Merged PiN Schottky Structure Enhances Robustness Of 650-V SiC Diodes,
Nexperia's PSC1065K 10-A, 650-V SiC Schottky diode

[For more details...](#)

Discrete Power Semis and Modules Article Archive

June 2023:

GaN ICs Are Robust And Easy To Use, Cambridge GaN Devices' H2 series ICeGaN HEMTs

[For more details...](#)

GaN Transistors Expand 100-V And 200-V Rad Hard Options, EPC's EPC7020 200-V, 11-m Ω GaN FET and EPC7003 100-V, 30-m Ω GaN FET

[For more details...](#)

E-Mode GAN FETs Address Low- And High-Voltage Applications, Nexperia's GAN080-650EBE, GAN140-650EBE, GAN140-650FBE, GAN190-650EBE, and GAN190-650FBE 650-V, GaN FETs in DFNs; GAN3R2-100CBE 100-V GaN FET in a WLCSP; and GAN7R0-150LBE 150-V GaN FET in an LGA

[For more details...](#)

1200-V SiC Power Modules Provide Independent Outputs And Small Size, Solitron Devices' SD11911 and SD11912 1200-V SiC power modules

[For more details...](#)

July 2023:

SiC Trench MOSFETs In TO263-7 Boost E-Mobility, Infineon's 1200-V CoolSiC MOSFETs

[For more details...](#)

SiC Schottky Diodes Offer 650-V To 1200-V And 6-A To 10-A Ratings, Bourns' BSDH10G65E2, BSDH10G120E2, BSDD06G65E2, BSDL10S65E6, BSDW20S65C6, BSDW20G120C2 SiC Schottky barrier diodes

[For more details...](#)

80-V And 100-V MOSFETs Enable Reduced Spiking In More Package Styles, Nexperia's NextPower 80-V and 100-V MOSFETs in LPAK56 and LPAK88 packages

[For more details...](#)

700-V SiC MOSFET Is Military Grade, Solitron Devices' SD11710 SiC MOSFET in a hermetically sealed TO-258

[For more details...](#)

Rectifiers Deliver Up To 7 A In DFN3820A Package, Vishay Intertechnology's VxNL63, VxNM63, VxN103, VxNM103, and VxNM153 series of 60-V, 100-V, and 150-V Trench MOS barrier Schottky rectifiers

Discrete Power Semis and Modules Article Archive

[For more details...](#)

August 2023:

40-V Rad-Hard GaN FETs Deliver High Performance For LEO And GEO Applications, EPC's EPC7001 and EPC7002 rad-hard GaN FETs

[For more details...](#)

IGBT Modules With 800-A Rating Benefit Solar Central Inverters, Infineon Technologies' 62-mm half-bridge and common-emitter module portfolio with 1200-V TRENCHSTOP IGBT7 chips, which includes the FF800R12KE7

[For more details...](#)

SJ MOSFETs Combine Low-Noise Characteristics With Fast Reverse-Recovery Time, ROHM Semiconductor's R60xxRNx series 600-V superjunction MOSFETs

[For more details...](#)

September 2023:

650-V IGBTs Target Energy-Efficient, Harsh-Environment Applications, Infineon's 650-V IGBT7 H7 TRENCHSTOP IGBTs

[For more details...](#)

Device Combines 3-A, 600-V Rectifier And 200-W TVS In 5-mm x 6-mm Package, Vishay Intertechnology's R3T2FPHM3 standard rectifier and transient voltage suppressor

[For more details...](#)

October 2023:

Robust Integrated GaN Platform Is Optimized For High-Power Applications, Navitas Semiconductor's GaNSafe Power ICs

[For more details...](#)

Planar Schottkys Come In Thinner DPAKs, Taiwan Semiconductor's ThinDPAK family of ultra-fast-recovery Schottky rectifiers

[For more details...](#)

November 2023:

Discrete Power Semis and Modules Article Archive

Semiconductor Technology Pushes Silicon Beyond Its Assumed Limits For Power Devices, iDEAL Semiconductor's SuperQ technology

[For more details...](#)

ESD Clamping Devices Offer ± 30 kV Protection For Wearables, Taiwan Semiconductor's TESD series of single-channel ESD clamping diodes

[For more details...](#)

December 2023:

62-mm Package For SiC MOSFETs Enables Higher Efficiency And Power Density, Infineon Technologies' CoolSiC MOSFET modules

[For more details...](#)

650-V GaN Power Switch Integrates Lossless Current Sensing, GaNPower International's GPI65060DFC power switch

[For more details...](#)

1200-V SOT-227 SiC MOSFET Modules Are Designed For High Reliability, SemiQ's QSiC silicon carbide modules

[For more details...](#)

January 2022:

Source-Down Power MOSFET Package Now Available For More Devices, Infineon Technologies' OptiMOS Source-Down power MOSFETs

[For more details...](#)

Fast Recovery Epitaxial Diodes Support Higher Current Applications, Taiwan Semiconductor's PUUPxxH family of fast recovery epitaxial diodes

[For more details...](#)

Third-Gen SiC MOSFETs Enhance Performance For EVs, STMicroelectronics' third-generation STPOWER SiC MOSFETs

[For more details...](#)

March 2022:

40-V Bidirectional GaN HEMT Brings GaN Into Phone Handsets, Innoscience Technology's INN40W08 GaN-on-Si e-mode HEMT

[For more details...](#)

Discrete Power Semis and Modules Article Archive

Precision P-Channel MOSFET Arrays Offer Nano-Power Operation, Advanced Linear Devices' ALD310702A/ALD310702 nano-power precision p-channel EPAD MOSFET arrays

[For more details...](#)

Fourth-Gen 600-V SJ MOSFET Lowers $R_{DS(ON)} \times Q_G$ FOM, Vishay Intertechnology's Vishay Siliconix SiHK045N60E n-channel power MOSFET

[For more details...](#)

600-V SJ MOSFETs Target Wide Range Of Applications, Magnachip Semiconductor's 11 new 2.5 generation (2.5G) superjunction MOSFETs

[For more details...](#)

50- μ A Zener Diodes Extend Battery Runtime And Save Space, Nexperia's Zener diodes in SOT23 (BZX8450), SOD323 (BZX38450), SOD523 (BZX58550) and DFN (BZX8850S) surface-mount packages

[For more details...](#)

April 2022:

40-V Rad-Hard GaN FET Boasts Low On-Resistance, EPC's EPC7019 eGaN FET

[For more details...](#)

650-V SiC MOSFETs In D²PAKs Reduce Switching Losses, Improve Thermal Performance, Infineon Technologies' CoolSiC MOSFETs

[For more details...](#)

Startup's 650-V GaN Devices' Boast Ease Of Use, Cambridge GaN Devices' ICeGaN 650-V H1 series of GaN HEMTs

[For more details...](#)

3.3-kV SiC MOSFETs And SBDs Extend Design Options For HV Power Electronics, Microchip Technology's expanded SiC portfolio includes the 25-m Ω MSC025SMA330 SiC MOSFET and 90-A MSC090SDA330 SiC SBD

[For more details...](#)

150-V GaN HEMTs Feature 8-V Withstand Gate Voltage, ROHM Semiconductor's GNE10xxTB series 150-V GaN HEMTs

[For more details...](#)

May 2022:

Discrete Power Semis and Modules Article Archive

350-V GaN Transistor Boasts Small Size And Low Cost, Efficient Power Conversion's EPC2050 350-V GaN transistor

[For more details...](#)

1200-V SiC FETs Ease Design Optimization, UnitedSiC's UF4SC120023K4S, UF4SC120030K4S, UF4C120053K4S/K3S and UF4C120070K4S/K3S Gen 4 1200-V SiC FETs

[For more details...](#)

1200-V SiC MOSFET Chips Improve On-Resistance And Robustness, Infineon Technologies' CoolSiC MOSFET 1200-V M1H advanced SiC chip

[For more details...](#)

GaN IC Enables Fast Switching, Narrow Pulses For Automotive Lidar, Efficient Power Conversion's EPC2221 common-source dual GaN FET

[For more details...](#)

Low-Cost 1200-V SiC MOSFET Offers 50-m Ω On-Resistance, Solitron Devices' SD11720 SiC MOSFET

[For more details...](#)

June 2022:

Press Pack IGBT For Transmission And Distribution Applications, Infineon Technologies Bipolar's Press Pack IGBT

[For more details...](#)

Trench Schottky Rectifiers Come In Space-Saving Package, Nexperia's 45-V, 60-V and 100-V rectifiers in CFP2-HP packages

[For more details...](#)

TVSs Offer High Surge Capability, Low Leakage Current In SMC Package, Vishay Intertechnology's SMC3KxxxCAHM3_A TRANSZORB bidirectional transient voltage suppressors

[For more details...](#)

July 2022:

Rad Hard 100-V GaN Transistor Boasts Low On-Resistance, Efficient Power Conversion's EPC7018 3.9-m Ω , 345-Apulsed GaN FET

[For more details...](#)

650-V IGBT Targets Solar Inverters, Magnachip Semiconductor's MBQ75T65P IGBT

Discrete Power Semis and Modules Article Archive

[For more details...](#)

GaN Transistor Targets Consumer, Industrial and Data Center Applications,
GaN Systems' GS-065-018-2-L 650-V 78-mΩ GaN transistor

[For more details...](#)

August 2022:

750-V SiC FETs Come In Thermally Enhanced Surface-Mount D2PAKs,
Qorvo's Gen 4 UJ4C/SC series SiC FETs with 9- to 60-mΩ on-resistance

[For more details...](#)

40-V MOSFETs Offer Low On-Resistance And Switching FOM, Taiwan
Semiconductor's PerFET series single- and dual-channel 40-V MOSFETS

[For more details...](#)

Power Transient Voltage Suppressors In Compact DFNs, Bourns' PTVS1 and
PTVS2 power transient voltage suppressor (PTVS) product families

[For more details...](#)

September 2022:

**NSREC Notes: Exhibitors Showcase Latest Reference Designs Along With
Progress In Rad-Tolerant And Rad-Hard Power Components
Powering Space-Grade FPGAs**

- Includes IR HiRel's IRHYS9A97034CM and IRHYB9A97034CM 60-V, 46-mΩ R9 p-channel MOSFETs; and the SMD-0.5e and the SMD-0.2e packages

[For more details...](#)

Power Modules Simplify SiC Inverter Designs, STMicroelectronics'
A2F12M12W2-F1 and A2U12M12W2-F2 STPOWER modules

[For more details...](#)

October 2022:

GaN Half-Bridge Power ICs Enable Megahertz Switching, Navitas
Semiconductor's NV6247 and NV6245C GaNSense half-bridge ICs

[For more details...](#)

Discrete Power Semis and Modules Article Archive

November 2022:

Next-Generation GaN Technology Doubles Power Density, Efficient Power Conversion's EPC2619 80-V 4-m Ω GaN FET

[For more details...](#)

950-V Superjunction MOSFETs With Fast Body Diode Address Lighting And Industrial SMPSs, Infineon Technologies' CoolMOS PFD7 MOSFET family

[For more details...](#)

GaN HEMT Family Adds 190-m Ω , 350-m Ω And 600-m Ω Devices In DFN Packages, Innoscience Technology's INN650D190A, INN650DA190A, INN650D350A, INN650DA350A and INN650DA600A 650-V GaN HEMT devices

[For more details...](#)

IPMs Increase Reliability And Performance For Low- And Medium-Power Drives, Infineon Technologies' IM523 series of intelligent power modules

[For more details...](#)

Small Smart Motor Module Addresses Space-Constrained Designs, Alpha and Omega Semiconductor's AOZ9530QV Smart Motor Module half-bridge power stage

[For more details...](#)

December 2022:

Application-Specific MOSFETs Are Optimized For 12-V Hotswap And Soft Start, Nexperia's 25-V and 30-V ASFETs for Hotswap and Soft Start

[For more details...](#)

MOSFET And Diode Power Modules For On-Board Charging And Other Applications, Vishay Intertechnology's VS-ENK025C65S dual-boost PFC MOSFET and full-bridge MOSFET inverter, VS-ENV020F65U six independent ultrafast rectifier legs for output rectification, VS-ENW30S120T full-bridge SiC diodes, VS-ENY050C60 full-bridge inverter MOSFET, VS-ENV020M120M six independent diode legs for ac line input rectification, VS-ENM040M60P half-controlled input bridge plus boost PFC leg MOSFET and half-bridge inverter MOSFET, and VS-ENZ025C60N double-interleaved bridgeless PFC (four channels) with individual return diodes

[For more details...](#)

Easy-To-Use GaN HEMTs Are Available In High Volume, Cambridge GaN Devices (CGD) IceGaN smart HEMT power solutions

[For more details...](#)

Discrete Power Semis and Modules Article Archive

January 2021:

3300-V And 1700-V SiC MOSFETs Shrink Auxiliary Power Supplies, GeneSiC
Semiconductor's 3300-V and 1700-V SiC MOSFETs

[For more details...](#)

February 2021:

Next-Gen SiC MOSFETs Are Optimized For xEVs And Industrial Applications,
Rohm Semiconductor's 4G SiC MOSFETs

[For more details...](#)

A Versatile Platform To Evaluate GaN Drivers And Transistors,
GaN Systems's GS-EVB-HB-66508B-RN and GS-EVB-HB-66516T-RN 650-V half-
bridge daughter cards

[For more details...](#)

80-V Resistor-Equipped Transistors Save Space In 48-V Applications,
Nexperia's NHDTx and NHUMx series of resistor-equipped transistors

[For more details...](#)

Fast Recovery AEC-Q Rectifiers Offer High Performance, Taiwan
Semiconductor's RS2x family of 2-A fast recovery rectifiers

[For more details...](#)

March 2021:

Third-Gen SiC MOSFETs Boast Better Figures-of-Merit, GeneSiC
Semiconductor's 1200-V G3R SiC MOSFETs

[For more details...](#)

NSREC Notes:

**Space Power Components Answer Calls For Higher Performance, Lower
Cost**

- **Bringing Higher Reliability To Plastic Parts**, Renesas's Intersil space
plastic products include 100-V GaN FET

Discrete Power Semis and Modules Article Archive

- **Expanding A Superjunction MOSFET Family, R9 p-channel rad hard power MOSFETs**

[For more details...](#)

April 2021:

15-A Bridge Rectifier Features 1000-V Rating In GBU Package, Taiwan Semiconductor's GBU150x family of standard bridge rectifiers

[For more details...](#)

May 2021:

Intelligent SiC Power Modules For E-Mobility And Aerospace Applications, CISSOID's Three-Phase SiC MOSFET IPMs

[For more details...](#)

Automotive-Qualified Trench Schottkys Feature Wettable-Flank Packaging, Taiwan Semiconductor's TSUP series AEC-101-qualified trench Schottky rectifiers

[For more details...](#)

Second-Generation 650-V GaN FETs Are Available In High Volume, Nexperia's GAN041-650WSB GaN FETs

[For more details...](#)

600-V IGBT IPMs Reduce Radiated Noise And Power Loss, ROHM Semiconductor's four new members of the BM6437x series of 600-V IGBT intelligent power modules (IPMs)

[For more details...](#)

June 2021:

Photocouplers Save Space In Industrial Drives And Solar Inverters, Renesas' RV1S9231A, RV1S9207A and RV1S9209A photocouplers

[For more details...](#)

July 2021:

650-V SiC Schottky Diodes Feature Low Built-In Voltage For High Efficiency, GeneSiC Semiconductor's fifth-generation GE* series SiC Schottky**

Discrete Power Semis and Modules Article Archive

MPS rectifiers

[For more details...](#)

150-V GaN HEMTs Raise Gate Withstand Voltage To 8 V, ROHM
Semiconductor's 150-V GaN HEMT devices

[For more details...](#)

August 2021:

650-V GaN FET Features Integrated Driver And Enhanced Protection, Tagore
Technology's TP44200NM 180-mΩ 650-V GaN E-HEMT device

[For more details...](#)

September 2021:

MOSFETs For Hot-Swap Increase SOA And Slash PCB Footprint, Nexperia's
PSMN4R2-80YSE and PSMN4R8-100YSE ASFETs

[For more details...](#)

750-V SiC FETs Boast A Low On-Resistance Of 6 mΩ, United SiC's Gen 4 750-V
SiC FETs

[For more details...](#)

October 2021:

**NSREC Notes: Vendor Talks Highlight Advances In Power Devices,
Packaging And Reference Designs For Space Applications**

- **Superjunction Technology**, includes IR HiRel's R9 rad-hard power MOSFETs
- **More Progress In Plastic**, includes Renesas' rad-hard 100-V GaN FET

[For more details...](#)

1200-V SiC Half-Bridge Power Modules Target Avionics Applications,
Solitron Devices' SD11900 SiC Power Modules

[For more details...](#)

November 2021:

**GaN Power ICs Integrate Fast Overcurrent And Overtemperature
Protection**, Navitas Semiconductor's third-gen GaNFast power ICs

[For more details...](#)

Discrete Power Semis and Modules Article Archive

Semiconductor Supplier Adds SiC Diodes To Portfolio, Nexperia's PSC1065H (-J/-K/-L) 650-V, 10-A SiC Schottky diodes

[For more details...](#)

December 2021:

100-V MOSFET Offers Improved On-Resistance And FOMs, Infineon Technologies' OptiMOS 6 100-V power MOSFET technology

[For more details...](#)

Zener Diodes With 1% Tolerance Provide More Precise Voltage References, Nexperia's BZT52H-A (SOD123F) and BZX384-A (SOD323) series Zener diodes

[For more details...](#)

January 2020:

IGBT Modules Offer 1200-V, 900-A Ratings For Medium Power Drives, Infineon Technologies' FF900R12ME7_B11 and FF900R12ME7P_B11 IGBT modules

[For more details...](#)

February 2020:

600-V Superjunction MOSFETs Enable High Power Density, Infineon's CoolMOS PFD7 series superjunction MOSFETs

[For more details...](#)

April 2020:

What We Missed At APEC: Silicon Carbide Marches On And Other Power Product News, includes ON Semiconductor's 1200-V and 900-V n-channel SiC MOSFETs including the 80-m Ω NVHL080N120SC1 and the NTBGO60N090SC1; Texas Instruments' 600-V GaN FETs with on-resistances of 150 m Ω , 70 m Ω , and 50 m Ω ; and Efficient Power Conversion's EPC2152 80-V, 12.5-A power stage IC (driver plus eGaN FET half-bridge).

[For more details...](#)

650-V SiC MOSFETs Offer High Reliability And Performance, Infineon Technologies' 650-V CoolSiC MOSFETs

[For more details...](#)

Discrete Power Semis and Modules Article Archive

SiC Schottky-Based Power Modules Maximize Ruggedness And Reliability, 700-, 1200- and 1700-V SiC Schottky barrier diode-based modules
[For more details...](#)

Surface-Mount Rectifiers Boost Density Of Power Supplies And Motor Controls, Taiwan Semiconductor's TUAS8X SMD rectifier series
[For more details...](#)

650-V MOSFETs Expand SiC Benefits To Broader Range Of Industrial Applications, Cree's Wolfspeed C3M0015065D, C3M0015065K, C3M0060065D, C3M0060065J and C3M0060065K 650-V SiC MOSFETs
[For more details...](#)

May 2020:

Expanded Portfolio Of 1200-V IGBT Modules Offers Solutions To 22 kW, Infineon Technologies 1200-V TRENCHSTOP IGBT7 modules
[For more details...](#)

June 2020:

Second-Gen Technology Boosts Performance Of 650-V GaN FET Devices, Nexperia's GAN041-650WSB and GAN039-650NTB/NBB GaN FETs
[For more details...](#)

1200-V SiC MOSFETs Feature Low Gate Resistance For High Efficiency, Alpha and Omega Semiconductor's 1200-V SiC MOSFET platform which includes the AOK065V120X2 65-m Ω SiC MOSFET
[For more details...](#)

Rectifiers With Wettable Flank Contacts Offer 8-A And 1-kV Ratings, Taiwan Semiconductor's TUAS8x surface-mount standard recovery rectifiers
[For more details...](#)

July 2020:

A Better Package For Rad Hard MOSFETs—PCBs Meet Their (CTE) Match, IR HiRel's SupIR-SMD package
[For more details...](#)

Discrete Power Semis and Modules Article Archive

Silicon Germanium Rectifiers Enable Higher Efficiency In High Temperature Applications, Nexperia's PMEGxGxELR/P SiGe rectifiers

[For more details...](#)

SiC-Based Three-Phase Driver Module Delivers 80 A Peak, Is Fully Integrated, Apex Microtechnology's SA310 three-phase driver

[For more details...](#)

August 2020:

Discrete Semiconductors In DFNs Shrink Footprints For Automotive Designs, Nexperia's automotive-qualified discretes in DFN packages

[For more details...](#)

IGBT Power Module Is Optimized For Mid-Power EV Traction Inverters, Infineon Technologies' HybridPACK DC6i IGBT power module

[For more details...](#)

September 2020:

Latest Generation 200-V GaN FETs Double The Performance, EPC's EPC2215 and EPC2207 200-V eGaN FETs

[For more details...](#)

October 2020:

Rad Hard GaN Power Transistors Span 40 V To 300 V, EPC Space's rad hard GaN power transistors

[For more details...](#)

1000-V Bridge Rectifiers Facilitate Compliance And Manufacturability, Taiwan Semiconductor's RxBS family of glass-passivated 1000-V bridge rectifiers

[For more details...](#)

Devices Copackage Silicon Half-Bridge Driver And 650-V GaN Transistors, STMicroelectronics' MasterGaN1 GaN half bridge with integrated drivers

[For more details...](#)

100-V GaN FETs Feature Lower On-Resistance, Higher Voltage Ratings, Efficient Power Conversion's EPC2218 and EPC2204 100-V eGaN FETs

[For more details...](#)

Discrete Power Semis and Modules Article Archive

200-V MOSFET Delivers 61-mΩ On-Resistance In 3-mm x 3-mm Package, Vishay Intertechnology's Vishay Siliconix SiSS94DN n-channel MOSFET

[For more details...](#)

November 2020:

6.5-kV SiC MOSFETs Offer High Performance For Medium-Voltage Applications, GeneSiC Semiconductor's 6.5-kV SiC MOSFET bare chips

[For more details...](#)

Application Specific FETs—A New Category Of More-Optimized MOSFETs, Nexperia's Application Specific MOSFETs (ASFETs)

[For more details...](#)

Next-Gen 650-V GaN Transistor Is Automotive Qualified, GaN Systems' GS-065-060-5-T-A 650-V, 60-A GaN transistor

[For more details...](#)

AEC-Q101 Qualified SiC Schottkys Are Rugged And Reliable, Microchip Technology's 700-V and 1200-V SiC Schottky barrier diodes

[For more details...](#)

Automotive GaN FET Includes Driver, Protection And Active Power Management, Texas Instruments' LMG3522R030-Q1, LMG3525R030-Q1, LMG3422R050, LMG3425R050, LMG3422R030 and LMG3425R030 600-V and 650-V GaN FETs with integrated driver, protection and temperature reporting

[For more details...](#)

December 2020:

Transfer Molded IPM Brings SiC Advantages To 1200-V Modules, Infineon Technologies' CIPOS Maxi IPM 1200-V SiC integrated power module

[For more details...](#)

SiC Schottky Diodes Boast Surge Current Robustness, UnitedSiC's UJ3D1725K2, UJ3D1210K2, UJ3D1220K2 and UJ3D1250K2 1200-V and 1700-V SiC Schottkys

[For more details...](#)

February 2019:

Discrete Power Semis and Modules Article Archive

Thyristor Modules Operate At Higher Junction Temperatures, Infineon Technologies Bipolar's Eco Block thyristor modules

[For more details...](#)

Fast-Recovery Super-Junction MOSFETs Enhance Performance Of Bridge And ZVS Converters, STMicroelectronics' MDmesh DM6 600-V MOSFETs

[For more details...](#)

AEC-Qualified GaN FETs For Lidar And 48-V Power Systems, EPC's EPC2206 and EPC2212 eGaN devices

[For more details...](#)

March 2019:

IGBT Power Modules Provide Higher Density And Lower Cost For Industrial Drives, Infineon Technologies' 1200-V TRENCHSTOP IGBT7 modules

[For more details...](#)

April 2019:

Large Portfolio Of Automotive-Grade SiC MOSFETs For EV Applications, Rohm Semiconductor's SCT3xxxxxHR series SiC MOSFETs

[For more details...](#)

May 2019:

SJ MOSFETs Offer Fast Reverse Recovery And Design Flexibility For EV Charging Stations, Home Appliances, ROHM Semiconductor's R60xxJNx 600-V superjunction MOSFETs

[For more details...](#)

Automotive-Qualified GaN FET Improves Lidar System Resolution, EPC's 80-V EPC2214 eGaN FET

[For more details...](#)

650-V High-Frequency IGBTs Boost Performance With High-Speed Technology, STMicroelectronics' HB2 650-V IGBT series

[For more details...](#)

Discrete Power Semis and Modules Article Archive

June 2019:

700-V MOSFETs And Schottkys Extend SiC Options For Designers, Microchip Technology's 700-V SiC MOSFETs and 700-V and 1200-V SiC Schottky barrier diodes

[For more details...](#)

July 2019:

SMD Bridge Rectifiers Save Assembly Costs, Increase Power Density, Taiwan Semiconductor's TBS series SMD bridge rectifiers (TBS406, TBS408, TBS410, TBS606, TBS608, TBS610)

[For more details...](#)

900-V GaN-on-Si FETs Empower Three-Phase Industrial Power Supplies And Automotive Converters, Transphorm's Gen III TP90H050WS FET

[For more details...](#)

December 2019:

1200-V Enhancement-Mode GaN Power Devices Challenge SiC, GaN Power International's GPIHV15DK and GPIHV30DDP5L GaN power FETs

[For more details...](#)

GaN Power Transistors Target High-End Audio And SMPSs, Infineon Technologies' IGT40R070D1 E8220 and IGLD60R190D1 CoolGaN power transistors

[For more details...](#)

SiC FETs Lower On-Resistance To Less Than 10 mΩ, UnitedSiC's UF3SC SiC FETs

[For more details...](#)

February 2018:

Rad-Hard GaN Devices Propel Space Power Supplies To Higher Performance, Renesas Electronics' ISL7002xSEH GaN FETs

[For more details...](#)

March 2018:

Discrete Power Semis and Modules Article Archive

1200-V SiC Schottky Diodes Target Urban Off-Board Chargers And Solar Inverters, Wolfspeed's C4D10120H, C4D15120H and C4D20120H 1200-V SiC Schottky diodes

[For more details...](#)

1200-V SiC MOSFETs Offer 120-m Ω or 160-m Ω On-Resistance, Littelfuse and Monolith Semiconductor's LSIC1MO120E0120 and LSIC1MO120E0160 SiC MOSFETs

[For more details...](#)

June 2018:

SiC Schottky Diodes Are Tailored For On-Board Chargers In Hybrids And EVs, Infineon Technologies' CoolSiC Schottky diode family

[For more details...](#)

650-V IGBTs Deliver High Efficiency With Soft Switching, ROHM's RGTV and RGW series 650-V IGBTs

[For more details...](#)

SiC JFET Cascodes Are High-Performance Upgrades For IGBTs And MOSFETs, UnitedSiC's UJ3C1200 series of 1200-V SiC JFET cascodes

[For more details...](#)

October 2018:

Half H-Bridge Module Combines SiC MOSFETs with Integrated Gate Drive, Apex Microtechnology's SA110 SiC half H-bridge module

[For more details...](#)

Smart Switch Supports Fuel Savings In Automotive Power Trains, Infineon Technology's TLE9104SH smart quad-channel powertrain switch

[For more details...](#)

November 2018:

600-V GaN FET Power Stages Boost Performance For Applications Up To 10 kW, Texas Instruments' LMG34x family of 600-V GaN power stages

[For more details...](#)

Discrete Power Semis and Modules Article Archive

SiC FETs Offer Faster Switching With Cascode Convenience, UnitedSiC's UF3C FAST series 650-V and 1200-V SiC FETs

[For more details...](#)

Superjunction MOSFET Offers 900-V Breakdown Voltage And Low Total Gate Charge, MagnaChip Semiconductor's 90R1K4P superjunction MOSFET

[For more details...](#)

December 2018:

Isolated High-Side Power Switch Offers SPI And Many Other Features, STMicroelectronics' ISO8200AQ isolated octal high-side smart power switch

[For more details...](#)

February 2017:

Intelligent Power Modules Offer More Packages, More Features For Appliances, STMicroelectronics' SLLIMM nano series of Intelligent Power Modules for motor drives

[For more details...](#)

March 2017:

900-V MOSFETs Enhance Power And Efficiency Of Flyback Converters, STMicroelectronics' MDmesh K5 superjunction MOSFETs

[For more details...](#)

May 2017:

GaN FETs Meet Hybrid, Electric Vehicle Needs, Transphorm's TPH3205WSBQ 650-V GaN FET

[For more details...](#)

100-V Power Stage Module Satisfies Cloud Infrastructure Requirements, ON Semiconductor's FDMF8811 100-V bridge power stage module

[For more details...](#)

June 2017:

Discrete Power Semis and Modules Article Archive

1200-V SiC Diodes Improve Performance Of Appliances, Vehicle Chargers, STMicroelectronics' 1200-V SiC Schottky diodes

[For more details...](#)

Isolated IGBT Package Improves Thermal Performance, Reduces Assembly Time, Infineon Technologies' TRENCHSTOP Advanced Isolation package

[For more details...](#)

August 2017:

150-A IGBT Modules Boost Power Density, Infineon Technologies' EconoPIM 3 IGBT modules

[For more details...](#)

October 2017:

P-Channel Zero-Threshold MOSFET Array Creates New Possibilities In Energy Harvesting, Advanced Linear Devices' ALD310700A/ALD310700 quad zero-threshold MOSFET array

[For more details...](#)

December 2017:

SJ MOSFETs Are Optimized For High-Power Soft-Switching Topologies, Infineon Technologies' CoolMOS CFD7 family of SJ MOSFETs

[For more details...](#)

April 2016:

650-V GaN FET Delivers Low On-Resistance In TO-247, Transphorm's TPH3207WS GaN FET

[For more details...](#)

Integrated Power Stages Raise Efficiency Of VR Solutions, Infineon Technologies' Integrated Power Stage family

[For more details...](#)

May 2016:

Discrete Power Semis and Modules Article Archive

600-V GaN FET Power Stage Promises Performance Boost And Reliability,
Texas Instruments' LMG3410 GaN FET power stage

[For more details...](#)

1200-V SiC MOSFETs Deliver Dramatic Improvements Versus Silicon IGBTs,
Infineon's CoolSiC MOSFETs and modules

[For more details...](#)

Embedded Component Packaging Leads To Tiny GaN Transistors, AT&S's
Embedded Component Technology

[For more details...](#)

June 2016:

1200-V Full SiC Module Boasts More-Efficient High-Frequency Operation,
ROHM Semiconductor's BSM180D12P3C007 SiC power module

[For more details...](#)

Discrete And Bare Die IGBTs Target Hybrid And All-Electric Vehicles,
Fairchild Semiconductor's FGY160T65SPD_F085 and FGY120T65SPD_F085 discrete IGBTs, PCGA200T65NF8, PCRKA20065F8, PCGA300T65DF8, and PCRKA30065F8 bare die IGBTs and diodes, and an automotive-grade module

[For more details...](#)

All-SiC Half-Bridge Power Module Features Highly Optimized Package Design,
Wolfspeed's CAS325M12HM2 62-mm power module

[For more details...](#)

July 2016:

GaAs Switches + 3D Package Will Enable Small, Fast Voltage Regulators,
Sarda Technologies' HIPS heterogeneously integrated power stage.

[For more details...](#)

August 2016:

Solder-Bond, 50-mm Thyristor/Diode Modules Offer Lower Cost, Infineon
Technologies' 50-mm thyristor/diode modules

[For more details...](#)

Discrete Power Semis and Modules Article Archive

1700-V SiC MOSFET Reduces Losses In Industrial Applications, ROHM's SCT2H12NZ SiC MOSFET

[For more details...](#)

September 2016:

1350-V IGBT Is Optimized For Soft-Switching, Alpha and Omega Semiconductor's AOK30B135W1 IGBT

[For more details...](#)

800-V Superjunction MOSFETs Improve Efficiency Of Flyback Converters, Infineon Technologies' CoolMOS P7 series of superjunction MOSFETs

[For more details...](#)

October 2016:

800-V SCRs Deliver High Temp Operation In Surface-Mount Package, STMicroelectronics' TM8050H-8 SCR

[For more details...](#)

1000-V SiC MOSFET Raises Power Density Of EV Battery Chargers, Wolfspeed's C3M0065100K SiC MOSFET

[For more details...](#)

1200-V GaN Power Modules Deliver Efficient, High-Speed Switching, VisIC Technologies' family of 1200-V GaN power modules

[For more details...](#)

IGBT Modules Feature Sixpack Topology, Ratings Up To 200 A, Vincotech's MiniSKiiP PACK 2 and MiniSKiiP PACK 3 1200-V IGBT modules

[For more details...](#)

November 2016:

Comprehensive Platform Eases Evaluation Of GaN Transistors, GaN Systems' daughterboard-style evaluation kit

[For more details...](#)

January 2015:

Discrete Power Semis and Modules Article Archive

4-mm x 5-mm Power Block Provides Another Option For Shrinking DC-DC Designs, International Rectifier's IRFH4257D dual power MOSFET

[For more details...](#)

Intelligent Power Modules Are Optimized For Embedded Motor Drives And Inverters, Rohm Semiconductor's family of IPMs

[For more details...](#)

February 2015:

1200-V SiC MOSFET Features <290-mΩ On-Resistance To 200°C, STMicroelectronics' SCT20N120 SiC MOSFET

[For more details...](#)

March 2015:

GaN FETs + Driver Module Lowers Barriers To GaN-Based Power Design, Texas Instruments' LMG5200 integrated half-bridge GaN FET power-stage

[For more details...](#)

SiC MOSFETs Miniaturize Ultra-High Voltage Pulse Generators, ROHM's SCT2080KE SiC MOSFET

[For more details...](#)

April 2015:

Top Five Products And Demos Seen at APEC 2015

- Cree's SiC-Module-Based 50-kW String PV Inverter
- Fairchild's New Extended Temperature Mid-Voltage MOSFETs Rated at 175° C

[For more details...](#)

May 2015:

GaN Transistors Are Cheaper Than Silicon, Efficient Power Conversion's EPC2035 and EPC2036 eGaN power transistors

[For more details...](#)

June 2015:

Discrete Power Semis and Modules Article Archive

9.5-kV Light-Triggered Thyristor Integrates Forward Recovery Protection,
Infineon Technologies Bipolar's Light-triggered thyristor

[For more details...](#)

Enhancement-mode GaN transistor Boasts 60-A Rating, *GaN Systems' GS65516T 60-A 650-V GaN transistor*

[For more details...](#)

July 2015:

900-V SiC MOSFET Outperforms Superjunction Silicon MOSFETs, *Cree's C3M0065090J SiC MOSFET*

[For more details...](#)

IGBT Modules Are Configurable For A Wide Range Of Applications, *Powerex's Integrated Power Modules (PIPMs)*

[For more details...](#)

September 2015:

Power MOSFETs Feature Low Turn-Off Losses, *STMicroelectronics' MDMesh M2 EP power MOSFETs*

[For more details...](#)

November 2015:

Super-Junction Power MOSFETs Move Up To 1500 V, *STMicroelectronics' MDmesh K5 superjunction MOSFETs*

[For more details...](#)

December 2015:

High-Temp SiC Power Modules Offer Different Configurations, *Current Ratings, CISSOID's CHT-PLUTO and CHT-EUROPA SiC power modules*

[For more details...](#)

February 2014:

Discrete Power Semis and Modules Article Archive

Package Innovation Shrinks 650-V And 800-V MOSFETs Into 5- x 6-mm Footprint, STmicroelectronics' PowerFLAT 5x6 HV and VHV packages

[For more details...](#)

March 2014:

100-V eGaN FET Benefits Power Switching And RF Applications, Efficient Power Conversion's EPC8010 power transistor

[For more details...](#)

April 2014:

1200-V SiC Power MOSFET Boasts 200°C Rating, STMicroelectronics' SCT30N120 SiC MOSFET

[For more details...](#)

Driver Stage Tailors Power Conversion Solution To High-Performance FPGAs, Altera's ET4040 monolithic 40-A driver plus synchronous MOSFET powertrain

[For more details...](#)

600-V GaN Devices Are Offered In PQFNs Plus TO-220s For Low-Power Designs, Transphorm's TPH3002LD and TPH3002LS 600-V GaN HEMT devices in PQFNs and TPH3002PD and TPH3002PS 600-V GaN HEMT devices in TO-220s

[For more details...](#)

June 2014:

1200-V SiC MOSFET Lowers On-Resistance To 25-mΩ In TO-247, Cree's C2M0025120D SiC MOSFET

[For more details...](#)

July 2014:

25-A Phase-Control Stud-Style Thyristors Come In TO-48 Packages, America Semiconductor's 25RIA series phase-control thyristors

[For more details...](#)

October 2014:

Discrete Power Semis and Modules Article Archive

All-SiC Half-bridge Module Reduces Cost And Size For Inverters, Cree's CAS300M17BM2 all-SiC 1.7-kV half-bridge power module

[For more details...](#)

Monolithic eGaN Half Bridge Boosts Efficiency For Buck Converters, Efficient Power Conversion's EPC2100 eGaN half bridge

[For more details...](#)

November 2014:

1200-V And 1700-V SiC Junction Transistors Are Positioned To Challenge SiC MOSFETs And Silicon IGBTs, GeneSiC Semiconductor's 1700-V SiC junction transistors (SJTs)—the GA50JT17-247 (25 mΩ), GA16JT17-247 (65 mΩ), and GA04JT17-247 (220 mΩ) —and 1200-V SJTs—the GA50JT12-247 (25 mΩ), GA20JT12-247 (60 mΩ), GA10JT12-247 (120 mΩ), and GA05JT12-247 (210 mΩ)

[For more details...](#)

December 2014:

Reverse-Conducting IGBTs Combine Strengths Of IGBTs And MOSFETs For High-Current Applications, IXYS's line of 3600-V reverse-conducting IGBTs

[For more details...](#)

January 2013:

Power MOSFETs Feature Ultra-Low On-State Resistance, International Rectifier's StrongIRFET family of 40-V HEXFET MOSFETs

[For more details...](#)

April 2013:

Smart Bypass Diode Lowers Power Dissipation, Texas Instruments' SM74611 smart bypass diode

[For more details...](#)

High-Voltage Silicon Diodes Achieve Ultrafast Recovery, Infineon Technologies' Rapid 1 and Rapid 2 650-V fast-recovery silicon diode families

[For more details...](#)

Discrete Power Semis and Modules Article Archive

May 2013:

Fast-Switching Solid-State Relays Consume Ultra-Low Power, *Electronic Design & Research's μ R2M and μ D2M series solid-state relays*

[For more details...](#)

Precision N-Channel MOSFET Arrays Feature Zero Threshold Voltage, *Advanced Linear Devices' ALD210800A/ALD210800 n-channel MOSFET arrays*

[For more details...](#)

June 2013:

Intelligent Power Modules Reinforce Automotive Safety, *Mitsubishi Electric's PM800CJG060G and PM500CJG120G J-series automotive IPMs*

[For more details...](#)

August 2013:

GTO Thyristor Handles 500 A In Smaller Package, *IXYS UK Westcode's S0500YC GTO thyristor*

[For more details...](#)

October 2013:

Trench Technology Boosts Efficiency, New Package Saves Space For Rad-Hard MOSFETs, *International Rectifier's R8 rad-hard trench MOSFETs*

[For more details...](#)

Enhancement-Mode GaN FET Delivers Extremely Low On-Resistance, *Efficient Power Conversion's EPC2018 eGaN FET*

[For more details...](#)

November 2013:

High-Voltage Gate Driver Features Unique Monitoring Capabilities, *Amantys' AP45CC1 IGBT gate driver*

[For more details...](#)

Discrete Power Semis and Modules Article Archive

January 2012:

Demo Suggests Cascode MOSFET Stacks up Well Against SiC And Si Switches, Alpha and Omega Semiconductor's and SemiSouth Laboratories' UniSiC 1200-V, 90-mΩ MOSFET

[For more details...](#)

Compound Power Devices Co-Package SiC Schottkys With MOSFETs Or IGBTs, Renesas Electronics' RJQ6020DPM, RJQ6021DPM, and RJQ6022DPM SiC compound power devices

[For more details...](#)

600-V SiC Schottky Targets Air Conditioners, Base Stations, And Solar Arrays, Renesas Electronics' RJS6005TDPP SiC Schottky barrier diode

[For more details...](#)

February 2012:

Power Device Enhances Scalability In Computing And Consumer Applications, International Rectifier's IR3551 50-A PowIRstage module

[For more details...](#)

April 2012:

Soft-Switching IGBT Replaces Relays In PTC Heaters For Hybrid And Electric Vehicles, International Rectifier's AUIRGDC0250 1200-V automotive-qualified IGBT for soft-switching applications

[For more details...](#)

May 2012:

50-A Power Devices Extend SiC Benefits To More Applications, Cree's family of 50-A SiC MOSFETs and Schottkys

[For more details...](#)

Power Modules Shrink Footprint For Appliances And Industrial Applications, International Rectifier's family of μIPM power modules

[For more details...](#)

Discrete Power Semis and Modules Article Archive

650-V 55-m Ω SiC JFETs Boast Extremely Low On-Resistance, SemiSouth Laboratories' SJDA065R055 SiC JFET power transistors

[For more details...](#)

July 2012:

MOSFET Delivers Low On-Resistance At 650 V, STMicroelectronics' STY139N65M5 650-V n-channel superjunction MOSFET

[For more details...](#)

September 2012:

High-Voltage GaN HEMT Achieves JEDEC Qualification, Transphorm's TPH2006PS 600-V GaN HEMT

[For more details...](#)

Super Junction MOSFETs Break New Ground At 900 V And 950 V, STMicroelectronics' SuperMESH 5 super junction MOSFETs

[For more details...](#)

October 2012:

Development Boards Simplify Evaluation Of eGAN FETs, Efficient Power Conversion's EPC9003 and EPC9006 development boards

[For more details...](#)

High-Speed 600-V IGBTs Feature Very Low Saturation Voltage, Advanced Power Electronics Corp.'s AP20GT60 n-channel IGBT family

[For more details...](#)

November 2012:

Robust High-Voltage MOSFETs Challenge Superjunction MOSFETs, Alpha and Omega Semiconductor's AlphaMOS II MOSFETs

[For more details...](#)

December 2012:

Discrete Power Semis and Modules Article Archive

High-Voltage IGBT Modules Handle 4160-V AC Lines, Powerex's QID3320002 and QID4515002 dual HVIGBT modules

[For more details...](#)

January 2011:

1200-V Silicon Carbide MOSFET Aims To Replace Silicon Devices, Cree's CMF20120D 1200-V SiC power MOSFET

[For more details...](#)

New Package Shrinks MOSFETs for Hi-Rel Space Applications, International Rectifier's family of hermetic rad-hard 100-V MOSFETs in the new SMD0.2 package

[For more details...](#)

SiC Schottkys Support Power Supply Designs for More-Efficient Data Centers, Cree's Z-Rec 650-V SiC Schottky diodes

[For more details...](#)

February 2011:

MOSFETs Boost DC-DC Converter Efficiency Up To 2%, International Rectifier's DirectFETplus 25-V power MOSFETs

[For more details...](#)

MOSFET Boasts Micro-ohm On-resistance, Picor's PI5101 MOSFET

[For more details...](#)

Surface-Mount SiC Schottky Targets Solar Micro-inverters, Cree's C2D05120 1200-V SiC Schottky diode

[For more details...](#)

SiC JFETs Are Now Shipping in Commercial Quantities, SemiSouth Laboratories' SJEP120R100, SJEP120R063 and SJEP170R550 normally-off trench SiC power JFETs

[For more details...](#)

March 2011:

GaN Semiconductor Startup Demos 99% Efficient DC-DC Boost Converter, Transphorm's EZ-GaN technology

Discrete Power Semis and Modules Article Archive

[For more details...](#)

Second-Gen GaN Transistors Feature Enhanced Performance, Lead-Free Packaging, Efficient Power Conversion's EPC2001 and EPC2015 enhancement-mode GaN-on-silicon FETs

[For more details...](#)

60-A Module Boasts Better Performance Than DrMOS and Other Power Devices, International Rectifier's IR3550 PowIRstage

[For more details...](#)

High-Voltage Superjunction MOSFET Enables High-Efficiency AC-DC Conversion, Alpha and Omega Semiconductor's AOTF27S60 600-V superjunction MOSFET

[For more details...](#)

CanPAK Family Adds Medium-Voltage MOSFETs, Infineon Technologies's 60-V to 150-V OptiMOS power MOSFETs

[For more details...](#)

May 2011:

High-Voltage Power Switch Features 225°C Operation, Logic-level Gate Control, Cissoid's CHT-Jupiter 600-V SiC power switch with logic-level gate drive

[For more details...](#)

Shielded Gate Lowers Losses For 60-V Trench FET, Fairchild Semiconductor's FDMS86500L N-channel, PowerTrench MOSFET

[For more details...](#)

Lower Current Rating And Price Extends SiC MOSFET Benefits To More Apps, Cree's CMF10120 24-A 1200-V SiC MOSFET

[For more details...](#)

600-V Fast IGBTs Reduce Inverter Size And Cost, Infineon Technologies IKD03N60RF and IKD04N60RF reverse-conducting IGBTs

[For more details...](#)

June 2011:

Power Module Targets Hybrid And Electric Vehicles, Mitsubishi Electric's CT300DJH060 J-Series transfer molded power module

Discrete Power Semis and Modules Article Archive

[For more details...](#)

August 2011:

High-Temperature Components For Power Design

- *40-V GaN Transistor Is Fully Enhanced at Lower Gate Voltage, Efficient Power Conversion's EPC2014 eGaN FET*
- *New Source For Space-Grade Power MOSFETs, STMicroelectronics' STRH100N10, STRH8N10, STRH40P10, STRH100N6 and STRH40N6 rad-hard power MOSFETs*
- *SiC JFETs Target High-end Audio, SemiSouth Laboratories SJEP120R100A and SJEP120R063A SiC JFETs*
- *Automotive-qualified MOSFETs Deliver Low $R_{DS(ON)}$ For Heavy Loads, International Rectifier's AUIRF1404 and other 40-V to 75-V MOSFETs*
- *1200-V SiC Schottkys Offer Higher Performance At Lower Cost, Cree's C4D02120x, C4D05120x, C4D10120x, C4D20120x and C4D40120x 1200-V Z-Rec SiC Schottky diodes*
- *Small-Signal Diode Operates To 225°C, CISSOID's CHT-GANYMEDE dual small-signal diode*

[For more details...](#)

September 2011:

Power MOSFETs, IGBTs, And Modules

- *Ultra-fast 1200-V IGBTs Target Induction Heating, International Rectifier's IRG7PH35UD1 and IRG7PH42UD1 trench IGBTs*
- *Ultra-fast 1200-V IGBTs Reduce Switching And Conduction Losses, International Rectifier's IRG7PH35xx, IRG7PH42xx, IRG7PH46xx, IRG7PH50x field-stop trench IGBTs*
- *1200-V IGBTs Feature High Gain, High Speed, IXYS's IXYH50N120C3, IXYH82N120C3, IXYN82N120C3H1, and IXYB82N120C3H1 IGBTs*
- *1200-V SiC JFET Power Module Is Offered As Standard Product, Microsemi's APTJC120AM13VCT1AG phase-leg SiC power module*
- *1200-V SiC JFET Delivers Low On-Resistance, SemiSouth Laboratories' SJDP120R045 and SJDC120R045 normally on trench SiC power JFETs*
- *Power Modules Strengthen Safety, Increase Functionality For Electric Vehicles, Mitsubishi Electric's J-series new intelligent power modules (IPMs) and J-series transfer-molded power modules (T-PMs), models PM150CJG120G, PM300CJG060G, PM300CJG120G, PM600CJG060G, CT300DJH120, and CT600DJH060*

Discrete Power Semis and Modules Article Archive

- *650-V MOSFETs Integrate Fast Body Diode For Higher Efficiency, Infineon Technologies' CFD2 650-V CoolMOS MOSFETs, model IPW65R080CFD*
- *Power Modules Are Tailored To All Major Solar Converter Topologies, Microsemi's power modules, models APTC60AM45BC1G, APTC60AM45B1G, APTC60AM83BC1G, APTC60AM83B1G, APTCV60HM45RCT3G, APTCV60HM45RT3G, APTCV60HM70RT3G, APTC60HM70RT3G, APTGT50H60RT3G, APTCV60HM45BC20T3G, APTCV60HM45BT3G, APTCV60HM70BT3G, APTGV50H60BT3G, APT5M65BBM19T3G, APTC60BBM24T3G, and APTGT100BB60T3G*
- *40-V To 600-V MOSFETs Are Optimized For Solar Microinverters, Alpha and Omega Semiconductor's AlphaMOS MOSFETs, models AOT240L, AOT260L, AOT290L, AOTF42S60, AOD11S60, and AOTF12N60FD*
- *Second-Gen 200-V GaN Transistor Delivers Enhanced Performance, Efficient Power Conversion's EPC2010 eGaN FET*
- *Trench MOSFETs Boost Efficiency In Synchronous Rectification Applications, Fairchild Semiconductor's FDP083N15A_F102, FDB082N15A and FDP036N10A 100-V and 150-V PowerTrench MOSFETs*
- *Development Board Eases Designs Based On 100-V GaN FETs, Efficient Power Conversion's EPC9006 development board for EPC2007 100-V eGaN FET*
- *Increased Voltage Ratings Extend MOSFET Benefits To More DC-DC Applications, STMicroelectronics' 60-V, 75-V, and 80-V STripFET VI DeepGATE power MOSFETs, models STP260N6F6, STH260N6F6-2, STP210N75F6, STH210N75F6-2, and STL75N8LF6*
- *P-Channel MOSFETs Improve Efficiency And Cut Costs In Automotive Designs, Infineon Technologies' OptiMOS P2 40-V family of trench power MOSFETs, 30 models including the IPD90P04P4-05*
- *Power MOSFETs For Automotive Reduce On-Resistance, STMicroelectronics' 30-V and 40-V STripFET VI DeepGATE power MOSFETs, 9 models*
- *Dual Asymmetric MOSFET Modules Push Power Density Higher, Fairchild Semiconductor's FDMS36xxS power-stage MOSFET modules*

[For more details...](#)

October 2011:

Diodes And Rectifiers

- *SiC Schottkys In DPAKs Offer 2-A To 10-A Ratings, Cree's C4D02120E, C4D05120E, C4D08120E, and C4D10120E 1200-V SiC Schottky diodes*
- *1200-V/5-A SiC Diodes Come In DPAK Packaging, SemiSouth Laboratories' SDB05S120 SiC diodes*

Discrete Power Semis and Modules Article Archive

- *200-V Schottky Achieves Over 2-kV ESD Protection, STMicroelectronics STPS60SM200C 200-V Schottky diode*
- *Low-VF Schottkys Come In Space-Saving Package, Central Semiconductor's CTLSH01-30 and CTLSH01-30L low-V_F Schottky diodes*
- *600-V Rectifiers Deliver Over 10 A In DPAK Package, Vishay Intertechnology's 200-V and 600-V FRED Pt Hyperfast and Ultrafast rectifiers, 18 models including models VS-12EWH06FNx-M3, VS-15AWL06FNx-M3, VS-15EWL06FNx-M3, VS-15EWH06FNx-M3, and VS-15EWX06FNx-M3*
[For more details...](#)

IGBTs Deliver Power Savings, Higher-Temperature Operation, Powerex's S-series 300-A to 800-A, 1200-V IGBTs, models CM300DY-24S, CM450DY-24S, CM600DY-24S, and CM800DY-24S
[For more details...](#)

Gate-Driver Evaluation Board For SiC Power Modules, SemiSouth Laboratories' SGDR2500P2 optoisolated gate-driver board
[For more details...](#)

November 2011:

IGBT Integrates Freewheeling Diode For Small Size In Induction Heating, Toshiba Electronics Europe's GT40QR21 1200-V IGBT
[For more details...](#)

December 2011:

Half-Bridge Power Modules Feature Small Footprint, Vincotech's flowPHASE 0 2nd Generation family of half-bridge power modules
[For more details...](#)

Trench-Based 100-V Schottkys Outperform Planars, ON Semiconductor's NTST30100CTG, NTST20100CTG and NTSB20U100CTG low-forward-voltage (LVFR) Schottky rectifiers
[For more details...](#)

January 2010:

Discrete Power Semis and Modules Article Archive

MOSFETs Take Top-Side Cooling A Step Further, CSD16407Q5C, CSD16408Q5C, CSD16325Q5C, CSD16321Q5C, and CSD16322Q5C DualCool NexFET MOSFETs from Texas Instruments

[For more details...](#)

February 2010:

DirectFETs Are Qualified for Automotive, International Rectifier's AUIRF7739L2 and AUIRF7665S2 AEC-Q101 qualified DirectFET2 power MOSFETs

[For more details...](#)

MOSFETs Boast Lower FOM at 200 V and 250 V, Infineon Technologies' OptiMOS power MOSFETs

[For more details...](#)

March 2010:

GaN Power Transistors Seek To Replace Silicon Power MOSFETs, Efficient Power Conversion's enhancement-mode GaN-on-silicon power transistors, models EPC1014, EPC1015, EPC1009, EPC1005, EPC1007, EPC1001, EPC1013, EPC1011, EPC1012, and EPC1010

[For more details...](#)

GaN-Based Power Stages Look To Reshape Point-of-Load Landscape, International Rectifier's iP2010 and iP2011 GaN-based power stage devices

[For more details...](#)

April 2010:

SiC Schottkys Push Voltage Ratings to 1700 V, Cree's CPW3-1700S010B and CPW3-1700S025B Z-Rec 1700-V junction barrier Schottky diodes

[For more details...](#)

Tiny MOSFETs Deliver Low On-Resistance For Load Switching, Alpha and Omega Semiconductor's AON7428 and AON7405 30-V power MOSFETs

[For more details...](#)

May 2010:

Discrete Power Semis and Modules Article Archive

Automotive MOSFETs Promise Low $R_{DS(ON)}$ and Durability, International Rectifier's family of automotive-qualified MOSFETs, 22 models including AU1RF1324, AU1RF2804, AU1RF1404Z, AU1RF4104, AU1RF1010Z, and AU1RF3710Z

[For more details...](#)

Modules Optimize Cost-Performance Ratio For Appliance Motor Drives, STMicroelectronics' STGIPS10K60A, STGIPS14K60, STGIPL14K60, and STGIPS20K60 Intelligent power modules (IPMs)

[For more details...](#)

June 2010:

Power Block Boosts Efficiency, Saves Space Versus Discrete MOSFETs, Texas Instruments' CSD86350Q5D Power Block

[For more details...](#)

DrMOS Module Delivers Over 90% Efficiency, Alpha and Omega Semiconductor's AOZ5006 6-mm x 6-mm DrMOS power module

[For more details...](#)

July 2010:

150-V MOSFET Enhances Performance Of Isolated DC-DC Converters, Fairchild Semiconductor's FDMS86200 150-V trench power MOSFET

[For more details...](#)

November 2010:

1200-V SiC Schottky Family Features 30-A Device In TO-247, SemiSouth Laboratories' family of 1200-V SiC power Schottky diodes

[For more details...](#)

MOSFET Package Delivers Top-Side Cooling In Industry-Standard Footprints, Fairchild Semiconductor's Dual Cool MOSFET packaging

[For more details...](#)

September 2009:

MOSFETs Minimize Gate Charge For Industrial Applications, IR's 150-V and 200-V HEXFET power MOSFETs, models include IRFB4615PBF and IRFB4620PBF

Discrete Power Semis and Modules Article Archive

[For more details...](#)

1-A, 200-V Ultrafast Rectifier Comes in MicroSMP, Vishay's MUH1Px surface-mount 1-A ultrafast rectifiers

[For more details...](#)

MOSFET Reduces On-Resistance in Tiny CSP, Fairchild Semiconductor's FDZ371PZ p-channel PowerTrench MOSFET

[For more details...](#)

October 2009:

Intelligent Power Module Sets New Mark for Power Delivery, Powerex's DIP-IPM family including models PS21A7A ,PS21A79, and PS22A72 to PS22A78-E

[For more details...](#)

November 2009:

600-V Silicon Rectifiers Approach SiC Performance, QSpeed's H-series 600-V silicon rectifiers including models QH03TZ600, QH05TZ600, QH08TZ600, and QH12TZ600

[For more details...](#)

Dual SiC MOSFET Modules Promise High Efficiency, Powerex's QJD1210006 and QJD1210007 1200-V, 100-A MOSFET modules

[For more details...](#)

Automotive-Qualified IGBT Improves Thermal Performance, International Rectifier's AUIRG7CH80K6B-M is a 1200-V IGBT

[For more details...](#)

December 2009:

Power Devices Perform At Extreme Temperatures, Cissoid's CHT-NMOS40xx 40-V MOSFETs,

[For more details...](#)