



Vishay Intertechnology, Inc.



Diodes for the  
**AUTOMOTIVE INDUSTRY**



All products listed  
in this brochure are  
AEC-Q101 qualified

For technical questions within your region, please contact: [DiodesAmericas@vishay.com](mailto:DiodesAmericas@vishay.com), [DiodesAsia@vishay.com](mailto:DiodesAsia@vishay.com), [DiodesEurope@vishay.com](mailto:DiodesEurope@vishay.com)

[www.vishay.com](http://www.vishay.com)

**Engine Vehicle Control Unit – 12 V / 24 V**

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ENGINE VEHICLE CONTROL UNIT – 12 V / 24 V

**ENGINE COOLING  
EXHAUST CONTROL SYSTEMS**

For technical questions within your region, please contact: [DiodesAmericas@vishay.com](mailto:DiodesAmericas@vishay.com), [DiodesAsia@vishay.com](mailto:DiodesAsia@vishay.com), [DiodesEurope@vishay.com](mailto:DiodesEurope@vishay.com)



## Small Signal Schottky Diodes

**BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges



## Schottky Rectifiers

**V20DM120HM3** – High Current Density, High Voltage Schottky Rectifiers

- 20 A, 120 V for freewheeling and high frequency rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## Small Signal Switching Diodes

**1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Silicon epitaxial planar diode
- Fast switching diode



## Standard Rectifiers

**SE10F Series** – Miniature-Package Rectifiers for Rail to Rail Signal Line Protection

- High ESD voltage and surge current capability
- Compatible with SOD-123 pad layout and package size

AUTOMOTIVE GRADE



## Standard Rectifiers

**MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## TVS

**SM8S10AT thru SM8S43AT** – High Power TVS for Main Load Dump Suppression for Rail to Rail Signal Line Protection

- 8000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

**SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers

**VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery,  $T_{jmax} = 175^\circ C$
- SMF (TO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers

**VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 3$  A, 200 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175^\circ C$
- SMPC (TO-277A) package with 1.1 mm low profile



AUTOMOTIVE GRADE

## Ultrafast Rectifiers

**VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 200 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175^\circ C$
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175^\circ C$
- SMPD (TO-263AC) package with 1.3 mm low profile





## Ultrafast Rectifiers

**VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery,  $T_{jmax} = 175$  °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





## Schottky Rectifiers

### **V8PAM12HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 8 A, 120 V for freewheeling and high frequency rectification
- SMPA (DO-221BC) package with 0.95 mm low profile



## Schottky Rectifiers

### **V20DM120HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 20 A, 120 V for freewheeling and high frequency rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## Small Signal Switching Diodes

### **BAV21WS** – Fast Switching Diode for General Purpose

- Silicon epitaxial planar diode



## Small Signal Schottky Diodes

### **SD103AWS** – Ideal for Fast Switching and Low Logic Level Applications

- Metal on silicon Schottky diode protected by PN junction guard ring
- Low forward voltage drop and fast switching ideal for protection of MOS devices, steering, biasing, and coupling diodes



## Standard Rectifiers

### **MSX1P Series** – Miniature Rectifiers With High ESD Capability for Rail to Rail Signal Line and Power line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers

### **SE10F Series** – Miniature-Package Rectifiers for Rail to Rail Signal Line Protection

- High ESD voltage and surge current capability
- Compatible with SOD-123 pad layout and package size



## Standard Rectifiers

### **SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

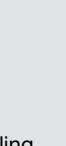
- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout



## TVS

### **SM5S10AT thru SM5S43AT** – High Power TVS for Main Load Dump Suppression

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SM6S10AT thru SM6S43AT** – High Power TVS for Main Load Dump Suppression

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SM8S10AT thru SM8S43AT** – High Power TVS for Main Load Dump Suppression

- 8000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers

### **AU3P Series** – High Current Density Ultrafast Rectifiers With High Avalanche Capability

- 3 A, up to 1 kV 20 mJ avalanche capability with fast switching characteristics
- SMPC (TO-277A) package with low profile of 1.1 mm





## Zener Diodes

### **BZD27B Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **BZD27C Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **PLZ Series** – 500 mW Zener Diodes in Low Profile

MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5 \%$
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **BZD27B-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **BZD27C-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable





POWERTRAIN – INJECTION CONTROL AND FUEL PUMP

**DIRECT INJECTOR CONTROL  
PIEZO INJECTION CONTROL  
FUEL PUMP CONTROL**

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## Schottky Rectifiers

**SS8PH9HM3, SS8PH10HM3** – High Current Density, High Voltage Schottky Rectifiers

- 8 A, 100 V for freewheeling and high frequency rectification
- SMPC (TO-277A) package with 1.1 mm low profile



## Small Signal Schottky Diodes

**BAT54** – Single and Dual Construction Protect Against Excessive Voltage

- Very low turn-on voltage and fast switching
- PN junction guard ring protects against excessive voltage, such as electrostatic discharges



## Standard Rectifiers

**MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## TVS

**SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Schottky Rectifiers

**V8PAM12HM3** – High Current Density, High Voltage Schottky Rectifiers

- 8 A, 120 V for freewheeling and high frequency rectification
- SMPA (DO-221BC) package with low profile of 0.95 mm



## TVS

**SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 8000 W clamping power rating for ISO16750-2: 2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

**SM6S10A thru SM6S36A** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Ultrafast Rectifiers

**AU3P Series** – High Current Density Ultrafast Rectifiers With High Avalanche Capability

- 2 A, 200 V fast-switching rectifier for high frequency applications, 20 mJ high avalanche capability, and 75 ns fast switching characteristics
- SMPC (TO-277A) package with low profile of 1.1 mm



## Ultrafast Rectifiers

**ESH2P Series** – Ultrafast Rectifiers With Wide Operating Temperature Range

- 2 A, 200 V fast switching rectifier for high frequency applications, 20 mJ high avalanche capability, and 75 ns fast switching characteristics
- SMP (DO-220AA) package with high operating temperature to +175 °C





## Ultrafast Rectifiers



**VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers



**VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 3 A, 200 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers



**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 8 A, 200 V for high frequency switching, 27 ns recovery, Tjmax = 175 °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes



**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Ultrafast Rectifiers



## Ultrafast Rectifiers

**VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers



## Ultrafast Rectifiers

**VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 4 A, 200 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Zener Diodes



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5\%$  ESD and surge rated
- Symmetrical leads are wave and reflow solderable





### Standard Rectifiers

#### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



### TVS

#### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



### Standard Rectifiers

#### **SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

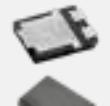
- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout



### TVS

#### **SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 8000 W clamping power rating for ISO16750-2: 2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



### Ultrafast Rectifiers

#### **AU3P Series** – High Current Density Ultrafast Rectifiers With High Avalanche Capability

- 2 A, 200 V fast-switching rectifier for high frequency applications, 20 mJ high avalanche capability, and 75 ns fast switching characteristics
- SMPC (TO-277A) package with low profile of 1.1 mm



### TVS

#### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



### Ultrafast Rectifiers

#### **VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile



### Ultrafast Rectifiers

#### **ESH2P Series** – Ultrafast Rectifiers With Wide Operating Temperature Range

- 2 A, 200 V fast switching rectifier for high frequency applications, 20 mJ high avalanche capability, and 75 ns fast switching characteristics
- SMP (DO-220AA) package with high operating temperature to +175 °C



### Ultrafast Rectifiers

#### **VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



### Ultrafast Rectifiers

#### **VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 3 A, 200 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C
- SMPC (TO-277A) package with 1.1 mm low profile



### Ultrafast Rectifiers

#### **VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 4 A, 200 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile





## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 8 A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175^\circ\text{C}$
- SMPD (TO-263AC) package with 1.3 mm low profile

## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable

## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable

## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- 500 mW power dissipation, excellent thermal characteristics,  $R_{thJA} 130 \text{ k/W}$
- Symmetrical leads are wave and reflow solderable





## Schottky Rectifiers

**V35DM120HM3** – High Current Density, High Voltage

## Schottky Rectifiers

- 35 A, 120 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## Schottky Rectifiers

**V35PWM10HM3** – High Current Density, High Voltage

## Schottky Rectifiers

- 35 A, 100 V Schottky rectifiers for freewheeling and rectification
- SlimDPAK (TO-252AE) package with 1.3 mm low profile; 120 V and 150 V types available



## Small Signal Schottky Diodes

**BAT54** – Single and Dual Construction Protect Against Excessive Voltage

- Very low turn-on voltage and fast switching
- PN junction guard ring protects against excessive voltage, such as electrostatic discharges



## Small Signal Switching Diodes

**BAV23C** – Fast Switching Dual Diode With Common Cathode

- Silicon epitaxial planar diode



## Standard Rectifiers

**MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers

**SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout



## TVS

**SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

**SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

**SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 8000 W clamping power rating for ISO16750-2: 2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

**SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers

**VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers

**VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile





## Ultrafast Rectifiers



**VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 3 A, 200 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers



**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 8 A, 200 V for high frequency switching, 27 ns recovery, Tjmax = 175 °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes



**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Ultrafast Rectifiers



Ultrafast Rectifiers

**VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 4 A, 200 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Zener Diodes



Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of ± 2.5 %
- Symmetrical leads are wave and reflow solderable





CHASSIS CONTROL

**ELECTRIC POWER STEERING (BLDC MOTOR DRIVE)  
TRANSMISSION ECU, DOUBLE CLUTCH BLDC**

For technical questions within your region, please contact: [DiodesAmericas@vishay.com](mailto:DiodesAmericas@vishay.com), [DiodesAsia@vishay.com](mailto:DiodesAsia@vishay.com), [DiodesEurope@vishay.com](mailto:DiodesEurope@vishay.com)



### Schottky Rectifiers



#### **V35DM120HM3** – High Current Density, High Voltage

##### Schottky Rectifiers

- 35 A, 120 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



### Small Signal Schottky Diodes



#### **SD103AWS** – Ideal for Fast Switching and Low Logic Level Applications



- Metal on silicon Schottky diode protected by PN junction guard ring
- Low forward voltage drop and fast switching ideal for protection of MOS devices, steering, biasing, and coupling diodes



### Standard Rectifiers



#### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection



- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



### TVS



#### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling

### Schottky Rectifiers



#### **V60D100CHM3** – High Current Density, High Voltage

##### Schottky Rectifiers

- 30 A x 2, 100 V Schottky rectifiers for freewheeling and high frequency rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



### Small Signal Switching Diodes



#### **BAV21WS** – Fast Switching Diode for General Purpose



- Silicon epitaxial planar diode

### TVS



#### **SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump



- 8000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



### TVS



#### **SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump



- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling

### Ultrafast Rectifiers



#### **VS-1EFH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (DO-219AB) package with < 1 mm low profile



### Ultrafast Rectifiers



#### **VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



### Ultrafast Rectifiers



**VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 3$  A, 100 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175$  °C
- SMPC (TO-277A) package with 1.1 mm low profile



### Ultrafast Rectifiers



**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



### Zener Diodes



**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



### Zener Diodes



**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



### Ultrafast Rectifiers



**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 100 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



### Zener Diodes



**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



### Zener Diodes



**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



### Zener Diodes



**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





## Schottky Rectifiers

### **V35DM120HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 35 A, 120 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## Schottky Rectifiers

### **V60D100CHM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 30 A × 2, 120 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## Small Signal Schottky Diodes



### **BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage such as electrostatic discharges



## Small Signal Switching Diodes



### **1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Silicon epitaxial planar diode
- Fast switching diode



## Standard Rectifiers

### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

AUTOMOTIVE  
GRADE

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers



### **SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout



## TVS

### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump



- 8000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection



- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers



### **VS-1EFH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (DO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers



### **VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers

**VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 3$  A, 100 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175$  °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 100 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile

MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





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## Schottky Rectifiers



### **V20DM120HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 20 A, 120 V for freewheeling and high frequency rectification
- SMPS (TO-263AC) package with 1.8 mm low profile

## Schottky Rectifiers



### **V35PWM10HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 35 A, 100 V Schottky rectifiers for freewheeling and rectification
- SlimDPAK (TO-252AE) package with 1.3 mm low profile; 120 V and 150 V types available

## Small Signal Schottky Diodes



### **SD103AWS** – Ideal for Fast Switching and Low Logic Level Applications

- Metal on silicon Schottky diode protected by PN junction guard ring
- Low forward voltage drop and fast switching ideal for protection of MOS devices, steering, biasing, and coupling diodes

## Small Signal Switching Diodes



### **BAV21WS** – Fast Switching Diode for General Purpose

- Silicon epitaxial planar diode

## Standard Rectifiers



### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space

## TVS



### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling

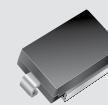
## Standard Rectifiers



### **SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout

## TVS



### **SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 8000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling

## TVS



### **SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling

## Ultrafast Rectifiers



### **VS-1EFH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (DO-219AB) package with < 1 mm low profile

## Ultrafast Rectifiers



### **VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers

**VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 3$  A, 100 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175$  °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 100 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





## Schottky Rectifiers



### **V40D100CHM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 20 A × 2, 120 V Schottky rectifiers for freewheeling and rectification
- SMPS (TO-263AC) package with 1.8 mm low profile



## Small Signal Schottky Diodes



### **SD103AWS** – Ideal for Fast Switching and Low Logic Level Applications

- Metal on silicon Schottky diode protected by PN junction guard ring
- Low forward voltage drop and fast switching ideal for protection of MOS devices, steering, biasing, and coupling diodes



## Standard Rectifiers



### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## TVS



### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Schottky Rectifiers

### **VSSAF5M10HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 5 A, 100 V Schottky Rectifiers for freewheeling and rectification
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm



## Small Signal Switching Diodes

### **BAV21WS** – Fast Switching Diode for General Purpose

- Silicon epitaxial planar diode



## Standard Rectifiers

### **SE20AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm



## TVS

### **SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## TVS

### **SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 8000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Ultrafast Rectifiers

### **VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers

### **VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile





## Ultrafast Rectifiers



### **VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- $2 \times 3$  A, 200 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175$  °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

### **VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 200 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile

## Ultrafast Rectifiers



### **VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

### **BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification



- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable

## Zener Diodes



### **BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification



- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification



- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable

## Zener Diodes



### **BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification



- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization



- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable



## Schottky Rectifiers

### **VSSAF5M6HM3** – High Current Density, High Voltage

#### TMBS® Rectifier

- 5 A, 60 V Schottky rectifiers, high temperature, low leakage, high current density
- SlimSMA (DO-221AC) package with low profile of 0.95 mm and compatible pad layout to SMA (DO-220AC)



## Small Signal Switching Diodes

### **BAV21WS** – Fast Switching Diode for General Purpose



- Silicon epitaxial planar diode



## Standard Rectifiers

### **SE20AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm



## TVS

### **TPSMB Series** – Surface-Mount PAR® Transient Voltage Suppressor With Wide Operating Temperature Range

- 600 W peak pulse power capability with a 10/1000  $\mu$ s waveform, repetitive rate (duty cycle) of 0.01 % ; up to 43 V breakdown voltage
- SMB (DO-214AA) package



## Ultrafast Rectifiers

### **VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers

### **VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 4 A, 200 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Small Signal Schottky Diodes

### **SD103AWS** – Ideal for Fast Switching and Low Logic Level Applications

- Metal on silicon Schottky diode protected by PN junction guard ring bullet
- Low forward voltage drop and fast switching ideal for protection of MOS devices, steering, biasing, and coupling diodes



## Standard Rectifiers

### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## TVS

### **TPSMA Series** – Surface-Mount PAR® Transient Voltage Suppressor With Wide Operating Temperature Range

- 400 W peak pulse power capability with a 10/1000  $\mu$ s waveform, repetitive rate (duty cycle) of 0.01 % up to 43 V breakdown voltage
- SMA (DO-214AC) package



## Ultrafast Rectifiers

### **VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers

### **VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 3 A, 200 V for high frequency switching , 25 ns recovery, Tjmax = 175 °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

### **VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 8 A, 200 V for high frequency switching, 27 ns recovery, Tjmax = 175 °C
- SMPD (TO-263AC) package with 1.3 mm low profile





## Zener Diodes

### **BZD27B Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **BZD27C Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **PLZ Series** – 500 mW Zener Diodes in Low Profile

MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5 \%$
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **BZD27B-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **BZD27C-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable





## ACTIVE SAFETY

**ENHANCED ELECTRICAL BRAKING (EEB)**  
**ELECTRONIC STABILITY PROGRAM (ESP)**  
**VEHICLE STABILITY CONTROL (VSC)**  
**ELECTRICAL PARKING BRAKE (EPB)**  
**INTEGRATED PARKING BRAKE (IPB)**  
**ADVANCED DRIVER ASSISTANCE SYSTEM (ADAS)**



## Schottky Rectifiers

### **V20DM120HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 20 A, 120 V for freewheeling and high frequency rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## Small Signal Schottky Diodes

### **BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package



- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage such as electrostatic discharges



## Standard Rectifiers

### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space

**Automotive Grade**



## TVS

### **SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection



- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers

### **VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Schottky Rectifiers

### **V40D100CHM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 20 A × 2, 120 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) miniature package with 1.8 mm low profile



## Small Signal Switching Diodes

### **1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package



- Silicon epitaxial planar diode
- Fast switching diode



## TVS

### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump



- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump



- 8000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Ultrafast Rectifiers

### **VS-1EFH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (DO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers

### **VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- 2 × 3 A, 100 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 100 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile

MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable



## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable





## Schottky Rectifiers

### **V40D100CHM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 20 A × 2, 120 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## Small Signal Schottky Diodes

### **BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage such as electrostatic discharges



## Standard Rectifiers

### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space

**AUTOMOTIVE GRADE**



## TVS

### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Schottky Rectifiers

### **V60D100CHM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 30 A × 2, 100 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## TVS

### **SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Standard Rectifiers

### **SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout



## Ultrafast Rectifiers

### **VS-1EFH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (DO-219AB) package with < 1 mm low profile



## TVS

### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers

### **VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile





## Ultrafast Rectifiers

**VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 3$  A, 100 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175$  °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 100 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile Ilet



## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





## Schottky Rectifiers

### **V20DM120HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 20 A, 120 V for freewheeling and high frequency rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## Schottky Rectifiers

### **V40D100CHM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 20 A × 2, 120 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## Small Signal Schottky Diodes



### **BAT54** – Single and Dual Construction Protect Against Excessive Voltage

- Very low turn-on voltage and fast switching
- PN junction guard ring protects against excessive voltage, such as electrostatic discharges



## Small Signal Switching Diodes



### **BAV23C** – Fast Switching Dual Diode with Common Cathode

- Silicon epitaxial planar diode



## Standard Rectifiers



### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers



### **SE20AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm



## TVS

### **SM5S10AT thru SM5S43AT** – High Power TVS for Main Load Dump Suppression

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SM6S10AT thru SM6S43AT** – High Power TVS for Main Load Dump Suppression

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS



### **SM8S10AT thru SM8S43AT** – High Power TVS for Main Load Dump Suppression for Rail to Rail Signal Line Protection

- 8000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS



### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers



### **VS-1EFH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (DO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers



### **VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 100 V for high frequency switching, 20 ns recovery, = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile





## Ultrafast Rectifiers

**VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 3$  A, 100 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175$  °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 100 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable



## Schottky Rectifiers

**V35PWM10HM3** – High Current Density, High Voltage

## Schottky Rectifiers

- 35 A, 100 V Schottky rectifiers for freewheeling and rectification
- SlimDPAK (TO-252AE) package with 1.3 mm low profile; 120 V and 150 V types available



BUY NOW

## Small Signal Schottky Diodes

**BAT54** – Single and Dual Construction Protect Against Excessive Voltage

- Very low turn-on voltage and fast switching
- PN junction guard ring protects against excessive voltage, such as electrostatic discharges



BUY NOW

## Standard Rectifiers

**MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## TVS

**SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

**SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

BUY NOW



- 8000 W clamping power rating for ISO16750-2: 2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



BUY NOW

## Ultrafast Rectifiers

**VS-1EFH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (DO-219AB) package with < 1 mm low profile



## Schottky Rectifiers

**V40D100CHM3** – High Current Density, High Voltage

## Schottky Rectifiers

- 20 A x 2, 120 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile

BUY NOW



## Small Signal Switching Diodes

**BAV23C** – Fast Switching Dual Diode With Common Cathode

BUY NOW

- Silicon epitaxial planar diode



## Standard Rectifiers

**SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

BUY NOW

- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout



## TVS

**SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

BUY NOW



- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

**SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

BUY NOW



- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers

**VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

BUY NOW



- 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile

## Ultrafast Rectifiers



### **VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- $2 \times 3$  A, 100 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175$  °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

### **VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 100 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile

## Ultrafast Rectifiers



### **VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes



### **BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification



- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable

## Zener Diodes



### **BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification



- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable

## Zener Diodes



### **BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification



- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization



- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable



## Schottky Rectifiers



### **V35DM120HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 35 A, 120 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## Small Signal Schottky Diodes



### **BAT54** – Single and Dual Construction Protect Against Excessive Voltage



- Very low turn-on voltage and fast switching
- PN junction guard ring protects against excessive voltage, such as electrostatic discharges



## Standard Rectifiers



### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## TVS



### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS



### **SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 8000 W clamping power rating for ISO16750-2: 2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Ultrafast Rectifiers



### **VS-1EFH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (DO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers



### **VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Schottky Rectifiers



### **V60D100CHM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 30 A × 2, 120 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile



## Small Signal Switching Diodes



### **BAV23C** – Fast Switching Dual Diode with Common Cathode

- Silicon epitaxial planar diode



## Standard Rectifiers



### **SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout



## TVS



### **SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS



### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers



### **VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile





## Ultrafast Rectifiers



**VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 3$  A, 100 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175$  °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers



**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes



**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Ultrafast Rectifiers



**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 100 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Zener Diodes



Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





## Schottky Rectifiers



### **V20PWM10HM3** – High Current Density, High Voltage TMBS® Rectifier

- 20 A, 100 V low leakage Schottky rectifiers for freewheeling and rectification
- SlimDPAK (TO-252AE) package with low profile of 1.3 mm

## Schottky Rectifiers



### **VSSAF5M10HM3** – High Current Density, High Voltage Schottky Rectifiers

- 5 A, 100 V Schottky rectifiers for freewheeling and rectification
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm

## Small Signal Schottky Diodes



### **BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package



- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage such as electrostatic discharges



## Small Signal Switching Diodes



### **1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Silicon epitaxial planar diode
- Fast switching diode

## Standard Rectifiers



### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection



- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers



### **SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout

## TVS



### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump



- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



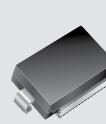
## TVS



### **SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling

## TVS



### **SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump



- 8000 W clamping power rating for ISO16750-2: 2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS



### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains

## Ultrafast Rectifiers



### **VS-1EFH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (DO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers



### **VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers



**VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 3$  A, 100 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175$  °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers



**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 100 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers



**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes



**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





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## Schottky Rectifiers

### **V20PWM10HM3** – High Current Density, High Voltage

#### TMBS® Rectifier

- 20 A, 100 V low leakage Schottky rectifiers for freewheeling and rectification
- SlimDPAK (TO-252AE) package with low profile of 1.3 mm



## Small Signal Schottky Diodes

### **SD103AWS** – Ideal for Fast Switching and Low Logic Level Applications



- Metal on silicon Schottky diode protected by PN junction guard ring
- Low forward voltage drop and fast switching ideal for protection of MOS devices, steering, biasing, and coupling diodes



## Standard Rectifiers

### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection



- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## TVS

### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Schottky Rectifiers

### **VSSAF5M6HM3** – High Current Density, High Voltage

#### TMBS® Rectifier

- 5 A, 60 V Schottky rectifiers, high temperature, low leakage, high current density
- SlimSMA (DO-221AC) package with low profile of 0.95 mm and compatible pad layout to SMA (DO-220AC)



## Small Signal Switching Diodes

### **BAV21WS** – Fast Switching Diode for General Purpose



- Silicon epitaxial planar diode

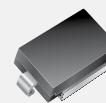


## Standard Rectifiers

### **SE20AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection



- High ESD voltage, current density, and surge current capability
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm

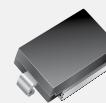


## TVS

### **SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump



- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection



- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## TVS

### **SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump



- 8000 W clamping power rating for ISO16750-2: 2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Ultrafast Rectifiers

### **VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- 1 A, 200 V for high frequency switching, 17 ns recovery,  $T_{jmax} = 175^\circ C$
- SMF (TO-219AB) package with < 1 mm low profile



## TVS

### **VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode



- 3 A, 200 V for high frequency switching, 20 ns recovery,  $T_{jmax} = 175^\circ C$
- SlimSMA (DO-221AC) package with 1 mm low profile



<p>Ultrafast Rectifiers</p> <p><b>VS-6CSH02HM3</b> – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode</p> <ul style="list-style-type: none"> <li>• <math>2 \times 3</math> A, 200 V for high frequency switching, 25 ns recovery, <math>T_{jmax} = 175</math> °C</li> <li>• SMPC (TO-277A) package with 1.1 mm low profile</li> </ul>	 <p><b>VS-8CVH02HM3</b> – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode</p> <ul style="list-style-type: none"> <li>• <math>2 \times 4</math> A, 200 V for high frequency switching, 22 ns recovery, <math>T_{jmax} = 175</math> °C</li> <li>• SlimDPAK (TO-252AE) package with 1.3 mm low profile</li> </ul>
<p>Ultrafast Rectifiers</p> <p><b>VS-16CDH02HM3</b> – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode</p> <ul style="list-style-type: none"> <li>• <math>2 \times 8</math> A, 200 V for high frequency switching, 27 ns recovery, <math>T_{jmax} = 175</math> °C</li> <li>• SMPD (TO-263AC) package with 1.3 mm low profile</li> </ul>	 <p>Zener Diodes</p> <p><b>BZD27B Series</b> – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification</p> <ul style="list-style-type: none"> <li>• 43 breakdown voltages from 3.6 V to 200 V</li> <li>• 2 % Zener voltage tolerance</li> <li>• Symmetrical leads are wave and reflow solderable</li> </ul>
<p>Zener Diodes</p> <p><b>BZD27B-M Series</b> – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification</p> <ul style="list-style-type: none"> <li>• 43 breakdown voltages from 3.6 V to 200 V</li> <li>• Halogen free, 2 % tolerance</li> <li>• Symmetrical leads are wave and reflow solderable</li> </ul>	 <p>Zener Diodes</p> <p><b>BZD27C Series</b> – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification</p> <ul style="list-style-type: none"> <li>• 43 breakdown voltages from 3.6 V to 200 V</li> <li>• Symmetrical leads are wave and reflow solderable</li> </ul>
<p>Zener Diodes</p> <p><b>BZD27C-M Series</b> – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification</p> <ul style="list-style-type: none"> <li>• 43 breakdown voltages from 3.6 V to 200 V</li> <li>• Halogen free</li> <li>• Symmetrical leads are wave and reflow solderable</li> </ul>	 <p>Zener Diodes</p> <p><b>PLZ Series</b> – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization</p> <ul style="list-style-type: none"> <li>• Very tight Zener voltage tolerances of <math>\pm 2.5</math> %</li> <li>• ESD and surge rated</li> <li>• Symmetrical leads are wave and reflow solderable</li> </ul>



## Schottky Rectifiers

### **V20PWM10HM3** – High Current Density, High Voltage TMBS® Rectifier

- 20 A, 100 V low leakage Schottky rectifiers for freewheeling and rectification
- SlimDPAK (TO-252AE) package with low profile of 1.3 mm



## Schottky Rectifiers

### **VSSAF5M6HM3** – High Current Density, High Voltage TMBS® Rectifier

- 5 A, 60 V Schottky rectifiers, high temperature, low leakage, high current density
- SlimSMA (DO-221AC) package with low profile of 0.95 mm and compatible pad layout to SMA (DO-220AC)



## Small Signal Schottky Diodes

### **BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage such as electrostatic discharges



## Small Signal Switching Diodes

### **1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Silicon epitaxial planar diode
- Fast switching diode



## Standard Rectifiers

### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers

### **SE20AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm



## TVS

### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 8000 W clamping power rating for ISO16750-2: 2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers

### **VS-1EFH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (DO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers

### **VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile





## Ultrafast Rectifiers



**VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 3$  A, 100 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175$  °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 100 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers



**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





## Schottky Rectifiers

### **V20PWM10HM3** – High Current Density, High Voltage TMBS® Rectifier

- 20 A, 100 V low leakage Schottky rectifiers for freewheeling and rectification
- SlimDPAK (TO-252AE) package with low profile of 1.3 mm



## Schottky Rectifiers

### **VSSAF5M6HM3** – High Current Density, High Voltage TMBS® Rectifier

- 5 A, 60 V Schottky rectifiers, high temperature, low leakage, high current density
- SlimSMA (DO-221AC) package with low profile of 0.95 mm and compatible pad layout to SMA (DO-220AC)



## Small Signal Schottky Diodes



### **SD103AWS** – Ideal for Fast Switching and Low Logic Level Applications

- Metal on silicon Schottky diode protected by PN junction guard ring
- Low forward voltage drop and fast switching ideal for protection of MOS devices, steering, biasing, and coupling diodes



## Small Signal Switching Diodes



### **BAV21WS** – Fast Switching Diode for General Purpose

- Silicon epitaxial planar diode



## Standard Rectifiers



### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers



### **SE20AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm



## TVS

### **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

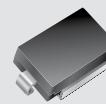
- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump



- 8000 W clamping power rating for ISO16750-2: 2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers



### **VS-1EFH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (DO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers



### **VS-2EJH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile





## Ultrafast Rectifiers

**VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 3$  A, 100 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175$  °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 100 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175$  °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile  
SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile  
SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile  
SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile  
MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





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## Schottky Rectifiers

### **V8PAM12HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 8 A, 120 V for freewheeling and high frequency rectification
- SMPA (DO-221BC) package with low profile of 0.95 mm



## Schottky Rectifiers

### **V10P10HM3** – High Current Density, High Voltage TMBS® Rectifier



- 10 A, 100 V for freewheeling and high frequency rectification
- SMPC (TO-277A) package with low profile of 1.1 mm



## Small Signal Schottky Diodes



### **SD103AWS** – Ideal for Fast Switching and Low Logic Level Applications

- Metal on silicon Schottky diode protected by PN junction guard ring bullet
- Low forward voltage drop and fast switching ideal for protection of MOS devices, steering, biasing, and coupling diodes



## Small Signal Switching Diodes



### **BAV21WS** – Fast Switching Diode for General Purpose

- Silicon epitaxial planar diode



## Standard Rectifiers

### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection



- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers



### **SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout



## TVS

### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## TVS



### **TPSMA Series** – Surface-Mount PAR® Transient Voltage Suppressor With Wide Operating Temperature Range

- 400 W peak pulse power capability with a 10/1000  $\mu$ s waveform, repetitive rate (duty cycle) of 0.01 %; up to 43 V breakdown voltage
- SMA (DO-214AC) package



## Ultrafast Rectifiers

### **VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile

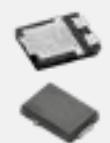


## Ultrafast Rectifiers



### **VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers

### **VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 3 A, 200 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers



### **VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 4 A, 200 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers



### **VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 8 A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175\text{ }^{\circ}\text{C}$
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes



### **BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



### **BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



### **BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



### **BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
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## Zener Diodes



### **PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5\text{ %}$
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





## Schottky Rectifiers

### **V8PAM12HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 8 A, 120 V for freewheeling and high frequency rectification
- SMPA (DO-221BC) package with low profile of 0.95 mm



## Schottky Rectifiers

### **VSSAF5M6HM3** – High Current Density, High Voltage

#### TMBS® Rectifier

- 5 A, 60 V Schottky rectifiers, high temperature, low leakage, high current density
- SlimSMA (DO-221AC) package with low profile of 0.95 mm and compatible pad layout to SMA (DO-220AC)



## Small Signal Schottky Diodes



### **BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges



## Small Signal Switching Diodes



### **1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Silicon epitaxial planar diode
- Fast switching diode



## Standard Rectifiers

### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection



- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers



### **SE20AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm



## TVS

### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## TVS



### **TPSMA Series** – Surface-Mount PAR® Transient Voltage Suppressor With Wide Operating Temperature Range

- 400 W peak pulse power capability with a 10/1000  $\mu$ s waveform, repetitive rate (duty cycle) of 0.01 %; up to 43 V breakdown voltage
- SMA (DO-214AC) package



## Ultrafast Rectifiers

### **VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile

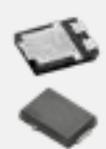


## Ultrafast Rectifiers



### **VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers

### **VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 3 A, 200 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers



### **VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 4 A, 200 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 8 A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175^\circ\text{C}$
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5\%$
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





## Schottky Rectifiers

### **V8PAM12HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 8 A, 120 V for freewheeling and high frequency rectification
- SMPA (DO-221BC) package with low profile of 0.95 mm



## Schottky Rectifiers

### **VSSAF5M6HM3** – High Current Density, High Voltage

#### TMBS® Rectifier

- 5 A, 60 V Schottky rectifiers, high temperature, low leakage, high current density
- SlimSMA (DO-221AC) package with low profile of 0.95 mm and compatible pad layout to SMA (DO-220AC)



## Small Signal Schottky Diodes



### **BAT54** – Single and Dual Construction Protect Against Excessive Voltage

- Very low turn-on voltage and fast switching
- PN junction guard ring protects against excessive voltage, such as electrostatic discharges



## Small Signal Switching Diodes



### **BAV23C** – Fast Switching Dual Diode With Common Cathode

- Silicon epitaxial planar diode



## Standard Rectifiers

### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers



### **SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout



## TVS

### **SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## TVS



### **TPSMA Series** – Surface-Mount PAR® Transient Voltage Suppressor With Wide Operating Temperature Range

- 400 W peak pulse power capability with a 10/1000  $\mu$ s waveform, repetitive rate (duty cycle) of 0.01 %; up to 43 V breakdown voltage
- SMA (DO-214AC) package



## Ultrafast Rectifiers

### **VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers



### **VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers

### **VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 3 A, 200 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers



### **VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 4 A, 200 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers



### **VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 8 A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175^\circ\text{C}$
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes



### **BZD27B Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



### **BZD27B-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



### **BZD27C Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



### **BZD27C-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



### **PLZ Series** – 500 mW Zener Diodes in Low Profile

MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5\%$
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable



## Schottky Rectifiers

### **V8PAM12HM3** – High Current Density, High Voltage

#### Schottky Rectifiers

- 8 A, 120 V for freewheeling and high frequency rectification
- SMPA (DO-221BC) package with low profile of 0.95 mm



## Schottky Rectifiers

### **VSSAF5M6HM3** – High Current Density, High Voltage

#### TMBS® Rectifier

- 5 A, 60 V Schottky rectifiers, high temperature, low leakage, high current density
- SlimSMA (DO-221AC) package with low profile of 0.95 mm and compatible pad layout to SMA (DO-220AC)



## Small Signal Schottky Diodes



### **BAT54** – Single and Dual Construction Protect Against Excessive Voltage

- Very low turn-on voltage and fast switching
- PN junction guard ring protects against excessive voltage, such as electrostatic discharges



## Small Signal Switching Diodes



### **BAV23C** – Fast Switching Dual Diode With Common Cathode

- Silicon epitaxial planar diode



## Standard Rectifiers

### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection



- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers



### **SE20AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm



## TVS



### **TPSMA Series** – Surface-Mount PAR® Transient Voltage Suppressor With Wide Operating Temperature Range

- 400 W peak pulse power capability with a 10/1000 µs waveform, repetitive rate (duty cycle) of 0.01 %; up to 43 V breakdown voltage
- SMA (DO-214AC) package



## TVS



### **TPSMB Series** – Surface-Mount PAR® Transient Voltage Suppressor With Wide Operating Temperature Range

- 600 W peak pulse power capability with a 10/1000 µs waveform, repetitive rate (duty cycle) of 0.01 % up to 43 V breakdown voltage
- SMB (DO-214AA) package



## Ultrafast Rectifiers



### **VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers



### **VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers



### **VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 × 3 A, 200 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers



### **VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 × 4 A, 200 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 8 A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175^\circ\text{C}$
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5\%$
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





48 VDC BOARDNET

**INTEGRATED STARTER GENERATORS (48 VDC)  
DC/DC CONVERTERS, BIDIRECTIONAL (48 VDC)  
HVAC (E-COMPRESSOR FOR 48 VDC)**

For technical questions within your region, please contact: [DiodesAmericas@vishay.com](mailto:DiodesAmericas@vishay.com), [DiodesAsia@vishay.com](mailto:DiodesAsia@vishay.com), [DiodesEurope@vishay.com](mailto:DiodesEurope@vishay.com)



# 48 VDC BOARDNET INTEGRATED STARTER GENERATORS (48 VDC)



## Small Signal Schottky Diodes

**BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage such as electrostatic discharges



## Standard Rectifiers

**MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Ultrafast Rectifiers

**VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery,  $T_{jmax} = 175^\circ\text{C}$
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers

**VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 4$  A, 200 V for high frequency switching, 22 ns recovery,  $T_{jmax} = 175^\circ\text{C}$
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Small Signal Switching Diodes

**1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

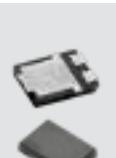
- Silicon epitaxial planar diode
- Fast switching diode



## Ultrafast Rectifiers

**VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery,  $T_{jmax} = 175^\circ\text{C}$
- SMF (TO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers

**VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 3$  A, 200 V for high frequency switching, 25 ns recovery,  $T_{jmax} = 175^\circ\text{C}$
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175^\circ\text{C}$
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable





# 48 VDC BOARDNET INTEGRATED STARTER GENERATORS (48 VDC)



Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile  
MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5\%$
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





## Small Signal Schottky Diodes

**BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage such as electrostatic discharges



## Small Signal Switching Diodes

**1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Silicon epitaxial planar diode
- Fast switching diode



## Standard Rectifiers

**MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## Standard Rectifiers

**SE20AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm



## TVS

**P6SMB Series** – Surface-Mount TransZorb® Transient Voltage Suppressor

- 600 W uni- and bidirectional TVS with up to 540 V breakdown voltage, AEC-Q101 qualified
- SMB (DO-214AA) package



## TVS

**SMC3K Series** – High Power Density Bidirectional TVS for Power Line Protection

- 3000 W clamping power rating for ISO16750-2:2012 Pulse b
- Designed for the protection of centralized load dump suppression powertrains



## Ultrafast Rectifiers

**VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers

**VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers

**VS-6CSH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 3 A, 200 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

**VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 4 A, 200 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile



## Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 8 A, 200 V for high frequency switching, 27 ns recovery, Tjmax = 175 °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable





## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile  
SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile  
SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile  
SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile  
MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- 500 mW power dissipation, excellent thermal characteristics,  $R_{thJA}$  130 k/W
- Symmetrical leads are wave and reflow solderable





# 48 VDC BOARDNET HVAC (E-COMPRESSOR FOR 48 VDC)



## Small Signal Schottky Diodes

**BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage such as electrostatic discharges



## Standard Rectifiers

**MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space

AUTOMOTIVE GRADE

## TVS

**SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 5000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Small Signal Switching Diodes

**1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Silicon epitaxial planar diode
- Fast switching diode



## TVS

**SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

**SM6S10AT thru SM6S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 6000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## TVS

**SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump

- 8000 W clamping power rating for ISO16750-2: 2012 Pulse a
- High clamping power capability for load dump protection and freewheeling



## Ultrafast Rectifiers

**VS-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 1 A, 200 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile



## Ultrafast Rectifiers

**VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 3 A, 200 V for high frequency switching , 25 ns recovery, Tjmax = 175 °C
- SMPC (TO-277A) package with 1.1 mm low profile



## Ultrafast Rectifiers

**VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 3 A, 200 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile



## Ultrafast Rectifiers

**VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- 2 x 4 A, 200 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile





## Ultrafast Rectifiers



**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode

- $2 \times 8$  A, 200 V for high frequency switching, 27 ns recovery,  $T_{jmax} = 175$  °C
- SMPD (TO-263AC) package with 1.3 mm low profile



## Zener Diodes



**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable

## Zener Diodes



**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable

## Zener Diodes



**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes



**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5$  %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable



FULL HYBRID VEHICLES (HEVS)

**ELECTRICAL MOTOR DRIVES (DC/AC)**

For technical questions within your region, please contact: [DiodesAmericas@vishay.com](mailto:DiodesAmericas@vishay.com), [DiodesAsia@vishay.com](mailto:DiodesAsia@vishay.com), [DiodesEurope@vishay.com](mailto:DiodesEurope@vishay.com)



## Small Signal Schottky Diodes

**BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges



## Standard Rectifiers

**MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## TVS

**1.5SMC Series** – Surface-Mount TransZorb® Transient Voltage Suppressor

- Up to 540 V breakdown voltage, available in uni-directional or bidirectional, high voltage TVS
- SMC (DO-214AB) package, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-16EDU06HM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 16 A, 600 V with low VF for high efficiency OBC
- Soft recovery,  $T_{jmax} = 175^\circ\text{C}$ , SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-ETH1506SHM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 15 A, 600 V with low  $Q_r$  for high frequency OBC
- Soft recovery,  $T_{jmax} = 175^\circ\text{C}$ , D<sup>2</sup>PAK (TO-263AB) package, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-ETH3007THN3** – High Current Density FRED Pt®

### Ultrafast Rectifiers in Through-Hole TO-220AC 2 Pin Package

- 30 A, 650 V, low  $Q_r$  for high efficiency OBC
- Soft recovery,  $T_{j max} = 175^\circ\text{C}$ , AEC-Q101 qualified



## Small Signal Switching Diodes

**1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Silicon epitaxial planar diode
- Fast switching diode



## Standard Rectifiers

**SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout



## TVS

**P6SMB Series** – Surface-Mount TransZorb® Transient Voltage Suppressor

- 600 W uni- and bidirectional TVS with up to 540 V breakdown voltage, AEC-Q101 qualified
- SMB (DO-214AA) package



## Ultrafast Rectifiers

**VS-30CDU06HM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 30 A, 600 V, low VF for high efficiency OBC
- Soft recovery,  $T_{jmax} = 175^\circ\text{C}$ , SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-ETH3006SHM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 30 A, 600 V, low  $Q_{rr}$  for high frequency OBC
- Soft recovery,  $T_{jmax} = 175^\circ\text{C}$ , D<sup>2</sup>PAK (TO-263AB) package, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-ETU3006SHM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 30 A, 600 V, low VF for high efficiency OBC
- Soft recovery,  $T_{j max} = 175^\circ\text{C}$ , D<sup>2</sup>PAK (TO-263AB) package, AEC-Q101 qualified





## Ultrafast Rectifiers

### **VS-ETX3007THN3** – High Current Density FRED Pt®

Ultrafast Rectifiers in Through-Hole TO-220AC 2 Pin Package

- 30 A, 600 V, lowest  $Q_{rr}$  for high frequency OBC
- Soft recovery,  $T_j$  max = 175 °C, AEC-Q101 qualified



## Zener Diodes

### **BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

### **PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5 \%$
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





FULL ELECTRIC VEHICLES (FEVS)

**ELECTRICAL MOTOR DRIVES (DC/AC)  
BATTERY MANAGEMENT AND DC/DC  
ON-BOARD CHARGERS**

For technical questions within your region, please contact: [DiodesAmericas@vishay.com](mailto:DiodesAmericas@vishay.com), [DiodesAsia@vishay.com](mailto:DiodesAsia@vishay.com), [DiodesEurope@vishay.com](mailto:DiodesEurope@vishay.com)



## Small Signal Schottky Diodes

**BAT46W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Very low turn-on voltage and fast switching
- Protected by a PN junction guard ring against excessive voltage such as electrostatic discharges



## Standard Rectifiers

**MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## TVS

**1.5SMC Series** – Surface-Mount TransZorb® Transient Voltage Suppressor

- Up to 540 V breakdown voltage, available in uni-directional or bidirectional, high voltage TVS
- SMC (DO-214AB) package, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-16EDU06HM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 16 A, 600 V with low VF for high efficiency OBC
- Soft recovery,  $T_{jmax} = 175^\circ\text{C}$ , SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-ETH1506SHM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 15 A, 600 V with low  $Q_r$  for high frequency OBC
- Soft recovery,  $T_{jmax} = 175^\circ\text{C}$ , D<sup>2</sup>PAK (TO-263AB) package, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-ETH3007THN3** – High Current Density FRED Pt®

### Ultrafast Rectifiers in Through-Hole TO-220AC 2-Pin Package

- 30 A, 650 V, low  $Q_r$  for high efficiency OBC
- Soft recovery,  $T_{j max} = 175^\circ\text{C}$ , AEC-Q101 qualified



## Small Signal Switching Diodes

**1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package

- Silicon epitaxial planar diode
- Fast switching diode



## Standard Rectifiers

**SE30AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout



## TVS

**P6SMB Series** – Surface-Mount TransZorb® Transient Voltage Suppressor

- 600 W uni- and bidirectional TVS with up to 540 V breakdown voltage, AEC-Q101 qualified
- SMB (DO-214AA) package



## Ultrafast Rectifiers

**VS-30CDU06HM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 30 A, 600 V, low VF for high efficiency OBC
- Soft recovery,  $T_{jmax} = 175^\circ\text{C}$ , SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-ETH3006SHM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 30 A, 600 V, low  $Q_r$  for high frequency OBC
- Soft recovery,  $T_{jmax} = 175^\circ\text{C}$ , D<sup>2</sup>PAK (TO-263AB) package, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-ETU3006SHM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 30 A, 600 V, low VF for high efficiency OBC
- Soft recovery,  $T_{j max} = 175^\circ\text{C}$ , D<sup>2</sup>PAK (TO-263AB) package, AEC-Q101 qualified





## Ultrafast Rectifiers



### **VS-ETX3007THN3** – High Current Density FRED Pt®

Ultrafast Rectifiers in Through-Hole TO-220AC 2-Pin Package

- 30 A, 600 V, lowest  $Q_{rr}$  for high frequency OBC
- Soft recovery,  $T_j$  max = 175 °C, AEC-Q101 qualified

## Zener Diodes



### **BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable

## Zener Diodes



### **BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable

## Zener Diodes



### **BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable

## Zener Diodes



### **BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable

## Zener Diodes



### **PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5 \%$
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable



## Small Signal Schottky Diodes

### **SD103AWS** – Ideal for Fast Switching and Low Logic Level Applications

- Metal on silicon Schottky diode protected by PN junction guard ring bullet
- Low forward voltage drop and fast switching ideal for protection of MOS devices, steering, biasing, and coupling diodes



## Standard Rectifiers

### **MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection

- High ESD voltage, current density, and surge current capability
- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space



## TVS

### **TA6F Series** – Surface-Mount PAR® Transient Voltage Suppressor for High Temperature Stability and High Reliability Conditions

- $T_J = 185^\circ\text{C}$ , suitable for high reliability conditions and automotive applications
- SlimSMA (DO-221AC) package with 0.95 mm low profile, compatible pad layout to SMA (DO-220AC)



## Ultrafast Rectifiers

### **VS-30CDU06HM3** – High Current Density FRED Pt®

#### Ultrafast Rectifiers

- 30 A, 600 V, low VF for high efficiency OBC
- Soft recovery,  $T_{Jmax} = 175^\circ\text{C}$ , SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified



## Ultrafast Rectifiers

### **VS-ETH3006SHM3** – High Current Density FRED Pt®

#### Ultrafast Rectifiers

- 30 A, 600 V, low  $Q_{rr}$  for high frequency OBC
- Soft recovery,  $T_{Jmax} = 175^\circ\text{C}$ , D<sup>2</sup>PAK (TO-263AB) package, AEC-Q101 qualified



## Ultrafast Rectifiers

### **VS-ETU3006SHM3** – High Current Density FRED Pt®

#### Ultrafast Rectifiers

- 30 A, 600 V, low VF for high efficiency OBC
- Soft recovery,  $T_{Jmax} = 175^\circ\text{C}$ , D<sup>2</sup>PAK (TO-263AB) package, AEC-Q101 qualified



## Small Signal Switching Diodes

### **BAV21WS** – Fast Switching Diode for General Purpose

- Silicon epitaxial planar diode



## Standard Rectifiers

### **SE20AF Series** – High Current Density Rectifiers With High ESD Capability for Power Line Protection

- High ESD voltage, current density, and surge current capability
- Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm



## Ultrafast Rectifiers

### **VS-16EDU06HM3** – High Current Density FRED Pt® Ultrafast Rectifiers

- 16 A, 600 V with low VF for high efficiency OBC
- Soft recovery,  $T_{Jmax} = 175^\circ\text{C}$ , SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified



## Ultrafast Rectifiers

### **VS-ETH1506SHM3** – High Current Density FRED Pt® Ultrafast Rectifiers

- 15 A, 600 V with low  $Q_{rr}$  for high frequency OBC
- Soft recovery,  $T_{Jmax} = 175^\circ\text{C}$ , D<sup>2</sup>PAK (TO-263AB) package, AEC-Q101 qualified



## Ultrafast Rectifiers

### **VS-ETH3007THN3** – High Current Density FRED Pt® Ultrafast Rectifiers in Through-Hole TO-220AC 2-Pin Package

- 30 A, 650 V, low  $Q_{rr}$  for high efficiency OBC
- Soft recovery,  $T_{Jmax} = 175^\circ\text{C}$ , AEC-Q101 qualified



## Ultrafast Rectifiers

### **VS-ETX3007THN3** – High Current Density FRED Pt® Ultrafast Rectifiers in Through-Hole TO-220AC 2-Pin Package

- 30 A, 600 V, lowest  $Q_{rr}$  for high frequency OBC
- Soft recovery,  $T_{Jmax} = 175^\circ\text{C}$ , AEC-Q101 qualified





## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization

- Very tight Zener voltage tolerances of  $\pm 2.5 \%$
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable





## Small Signal Schottky Diodes

**SD103AWS** – Ideal for Fast Switching and Low Logic Level Applications

- Metal on silicon Schottky diode protected by PN junction guard ring bullet
- Low forward voltage drop and fast switching ideal for protection of MOS devices, steering, biasing, and coupling diodes



## TVS

**1.5SMC Series** – Surface-Mount TransZorb® Transient Voltage Suppressor

- Up to 540 V breakdown voltage, available in uni-directional or bidirectional, high voltage TVS
- SMC (DO-214AB) package, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-30CDU06HM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 30 A, 600 V, low VF for high efficiency OBC
- Soft recovery,  $T_{jmax} = 175^\circ\text{C}$ , SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-ETH3007THN3** – High Current Density FRED Pt®

### Ultrafast Rectifiers in Through-Hole TO-220AC 2-Pin Package

- 30 A, 650 V, low  $Q_{rr}$  for high efficiency OBC
- Soft recovery,  $T_j \text{ max} = 175^\circ\text{C}$ , AEC-Q101 qualified



## Zener Diodes

**BZD27B Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable



## Small Signal Switching Diodes

**BAV21WS** – Fast Switching Diode for General Purpose

- Silicon epitaxial planar diode



## TVS

**P6SMB Series** – Surface-Mount TransZorb® Transient Voltage Suppressor

- 600 W uni- and bidirectional TVS with up to 540 V breakdown voltage, AEC-Q101 qualified
- SMB (DO-214AA) package



## Ultrafast Rectifiers

**VS-ETH3006SHM3** – High Current Density FRED Pt®

### Ultrafast Rectifiers

- 30 A, 600 V, low  $Q_{rr}$  for high frequency OBC
- Soft recovery,  $T_{jmax} = 175^\circ\text{C}$ , D<sup>2</sup>PAK (TO-263AB) package, AEC-Q101 qualified



## Ultrafast Rectifiers

**VS-ETX3007THN3** – High Current Density FRED Pt®

### Ultrafast Rectifiers in Through-Hole TO-220AC 2-Pin Package

- 30 A, 600 V, lowest  $Q_{rr}$  for high frequency OBC
- Soft recovery,  $T_j \text{ max} = 175^\circ\text{C}$ , AEC-Q101 qualified



## Zener Diodes

**BZD27B-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable



## Zener Diodes

**BZD27C-M Series** – Zener Diodes in Low Profile

SMF (DO-219AB) Package With Surge Current Specification

- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free
- Symmetrical leads are wave and reflow solderable





Zener Diodes

**PLZ Series** – 500 mW Zener Diodes in Low Profile  
MicroSMF (DO-219AC) Package Provide Voltage Stabilization



- Very tight Zener voltage tolerances of  $\pm 2.5\%$
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable



NETWORKS

**CAN BUS, LIN BUS, FLEX BUS**

For technical questions within your region, please contact: [DiodesAmericas@vishay.com](mailto:DiodesAmericas@vishay.com), [DiodesAsia@vishay.com](mailto:DiodesAsia@vishay.com), [DiodesEurope@vishay.com](mailto:DiodesEurope@vishay.com)



## ESD Protection

### **GSOTxx-Series** – 1-Line Uni-Directional Protection Diode in SOT23 Package

- Working range from 3 V up to 36 V;  $\pm 30$  kV contact discharge;  $\pm 30$  kV air discharge
- Very common SOT23 package



## ESD Protection

### **SMF-Series** – Uni-Directional ESD Protection Diode in Low Profile SMF (DO-219AB)

- Devices offer low 1 mm profile, low noise technology, fast response times
- Symmetrical leads are wave and reflow solderable



AUTOMOTIVE  
GRADE



## ESD Protection

### **VCAN26A2-03G** – 2-Line Bidirectional Protection Diode in Small-Size SOT323 Package

- Working range of  $\pm 26.5$  V; low leakage current  $IR < 0.05$   $\mu$ A
- Low load capacitance  $CD < 13$  pF
- CAN BUS related performance in smallest SOT323 package



## ESD Protection

### **VCUT05E1-SD0** – Uni-Directional ESD Protection Diode in Tiny CLP0603 Package

- Working range of  $\pm 5.5$  V; low leakage current  $< 0.1$   $\mu$ A; low load capacitance  $CD < 14$  pF
- CLP0603 package is one of the smallest in the industry; low profile of 0.27 mm and uses 3x less board space than 1006 case size



## ESD Protection

### **VLIN1616-02G** – 1-Line Bidirectional Protection Diode in Small-Size SOD323 Package

- Low load capacitance of 15.5 pF typical and 18 pF maximum
- Compact SOD-323 package measures only 1.95 mm x 1.5 mm with low 0.95 mm profile



## ESD Protection

### **VLIN2626-02G** – 1-Line Bidirectional Protection Diode in Small-Size SOD323 Package

- Working range of  $\pm 26.5$  V; low leakage current  $IR < 0.05$   $\mu$ A
- Low load capacitance  $CD < 16$  pF
- LIN BUS related performance in smallest SOD323 package



## ESD Protection

### **GSOTxxC-Series** – 2-Line Uni-Directional Protection Diode in SOT23 Package

- Working range from 3 V up to 36 V;  $\pm 30$  kV contact discharge;  $\pm 30$  kV air discharge
- Very common SOT23 package



## ESD Protection

### **VBUS05B1-SD0** – Uni-Directional low Cap ESD Protection Diode in Tiny CLP0603 Package

- Capacitance down to 0.29 pF typical
- CLP0603 package is one of the smallest in the industry; low profile of 0.27 mm and uses 3x less board space than 1006 case size



## ESD Protection

### **VCAN26A2-03S** – 2-Line Bidirectional Protection Diode in SOT23 Package

- Working range of  $\pm 26.5$  V; low leakage current  $IR < 0.05$   $\mu$ A
- Low load capacitance  $CD < 13$  pF
- Very common SOT23 package



## ESD Protection

### **VLIN1616-02G** – 1-Line Bidirectional Protection Diode in Small-Size SOD323 Package

- Working range of  $\pm 16$  V; low leakage current  $IR < 0.05$   $\mu$ A
- Low load capacitance  $CD < 24$  pF
- LIN BUS related performance in smallest SOD323 package



## ESD Protection

### **VLIN26A1-03G** – 1-Line Bidirectional Protection Diode in Small-Size SOT323 Package

- Working range of  $\pm 26.5$  V; low leakage current  $IR < 0.05$   $\mu$ A
- Low load capacitance  $CD < 13$  pF
- LIN BUS related performance in smallest SOT323 package



## ESD Protection

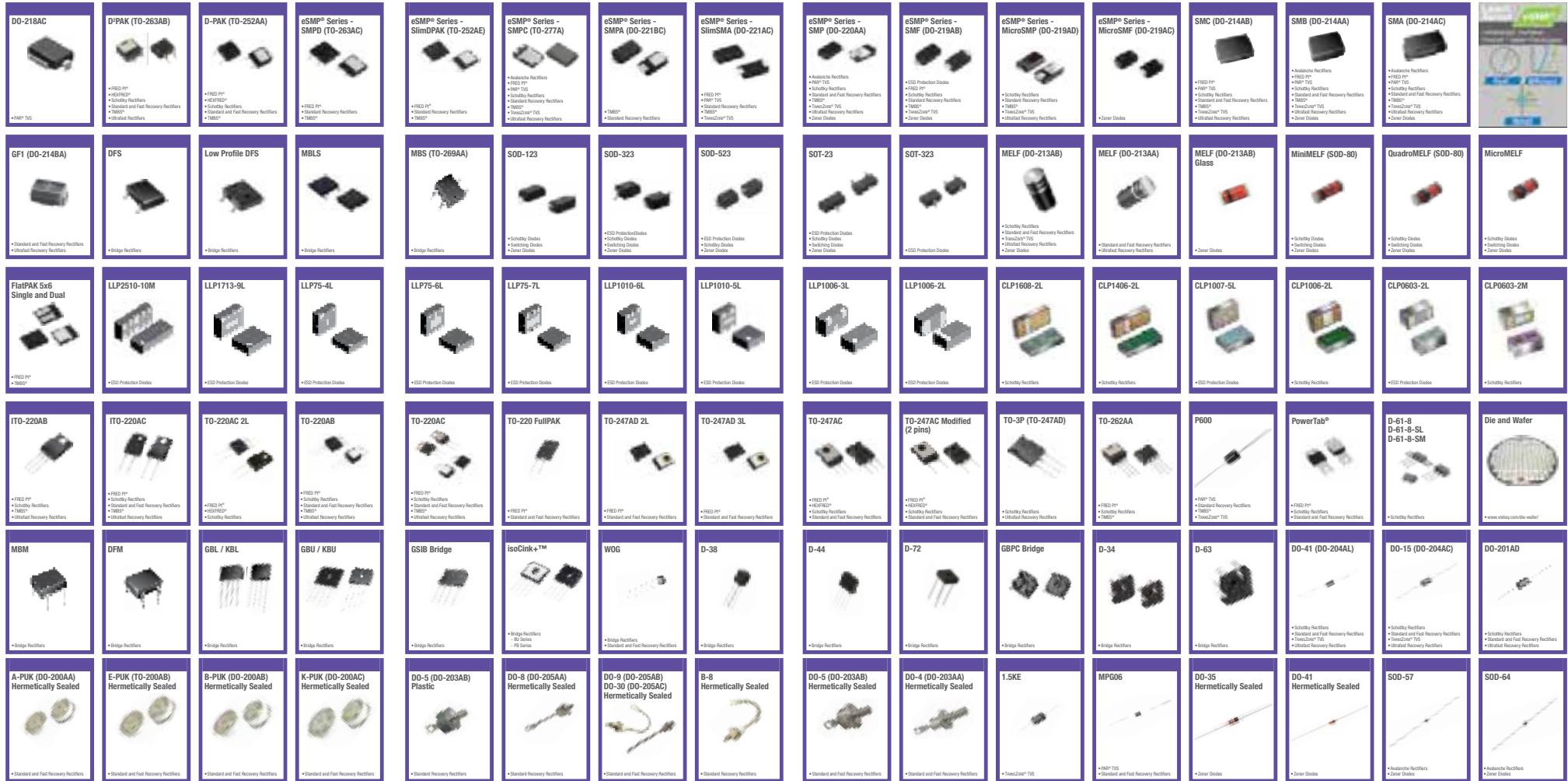
### **TVS-Series** – Uni-Directional ESD Protection Diode in Low Profile SMF (DO-219AB)

- Feature a 2 % breakdown voltage tolerance, low 1 mm profile, low noise technology, and fast response times
- Symmetrical leads are wave and reflow solderable





# The Art of Diodes and Rectifiers



## eSMP® Series



## FlatPAK



## FlipKY® Gen 2 (Schottky Diodes in CLP Package)



A WORLD OF  
**SOLUTIONS™**

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# AEC-Q101 Diodes

Small-Signal Switching      Zener      Automotive      FlipKY®      High Power Density      isoCink+™ Bridge      Fast Response Time      Small-Signal Schottky      Power Supply      High ESD Immunity

Ultrafast Recovery      Medium Power      Industrial      HEXFRED®      Green Power Package      Low Forward Voltage Drop      Low Profile      eSMP® Series Packages      TMBS® Rectifiers      ESD Capability Rectifiers      Avalanche Schottky      High-Performance Planar SUPEREECTIFIER®

Load Dump      ESD Protection      EMI Filter      Standard Recovery      Halogen-Free      High Power Surface-Mount      FRED PT® Bridge