Diodes for the Automotive Industry
All products listed in this brochure are AEC-Q101 qualified.
ENGINE VEHICLE CONTROL UNIT – 12 V / 24 V

ENGINE COOLING
EXHAUST CONTROL SYSTEMS
ENGINE VEHICLE CONTROL UNIT – 12 V / 24 V

ENGINE COOLING

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

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

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

Ultrafast Rectifiers
VS-1EH02HM3 – 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-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

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
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

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-16CDH02HM3 – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
• 2 × 8 A, 200 V for high frequency switching, 27 ns recovery, Tjmax = 175 °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, $T_{\text{max}} = 175 \, ^\circ\text{C}$
- SlimSMA (DO-219AC) package with 1 mm low profile

**Zener Diodes**


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

**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

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

- Very tight Zener voltage tolerances of ± 2.5 %
- ESD and surge rated
- 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

**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

**Ultrafast Rectifiers**

**VS-2EJH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
### ENGINE VEHICLE CONTROL UNIT – 12 V / 24 V
### EXHAUST CONTROL SYSTEMS

#### Schottky Rectifiers

**V8PAM12HM3** – High Current Density, High Voltage
- 8 A, 120 V for freewheeling and high frequency rectification
- SMPA (DO-218BC) package with 0.95 mm low profile

#### Schottky Rectifiers

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

#### 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

#### Schottky Rectifiers

**V8PAM12HM3** – High Current Density, High Voltage
- 8 A, 120 V for freewheeling and high frequency rectification
- SMPA (DO-218BC) package with 0.95 mm low profile

#### Schottky Rectifiers

**V20DM120HM3** – High Current Density, High Voltage
- 20 A, 120 V for freewheeling and high frequency rectification
- SMPD (TO-263AC) package with 1.8 mm low profile

#### 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

**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

#### 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
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POWERTRAIN – INJECTION CONTROL AND FUEL PUMP

DIRECT INJECTOR CONTROL
PIEZOELECTRIC INJECTION CONTROL
FUEL PUMP CONTROL

For technical questions within your region, please contact: DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com
### 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

**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

### 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

**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

**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

**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

**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

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 × 8 A, 200 V for high frequency switching, 27 ns recovery, Tjmax = 175 °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, Tjmax = 175 °C
- SlimSMA (DO-221AC) package with 1 mm low profile

**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-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

**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

**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**

**PLZ Series** – 500 mW Zener Diodes in Low Profile
MicroSMF (DO-219AC) Package Provide Voltage Stabilization
- Very tight Zener voltage tolerances of ± 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

**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

**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

**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
- SMP (TO-277A) package with low profile of 1.1 mm

**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

**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
- SMP (TO-277A) package with 1.1 mm low profile

**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

**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

### 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

**SMC5K Series** – High Power Density Uni-Directional TVS for Power Line Load Dump
- Designed for the protection of centralized load dump suppression powertrains

**SMC6K Series** – High Power Density Uni-Directional TVS for Power Line Load Dump
- Designed for the protection of centralized load dump suppression powertrains

**SMC8K Series** – High Power Density Uni-Directional TVS for Power Line Load Dump
- Designed for the protection of centralized load dump suppression powertrains
### Ultrafast Rectifiers

#### VS-16CDH02HM3
- High Current Density, Soft Recovery, FRED P® Ultrafast Diode
- 2 × 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

#### 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

#### 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
- Symmetrical leads are wave and reflow solderable

#### 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
- 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, Rθja 130 k/W
- Symmetrical leads are wave and reflow solderable
### POWERTRAIN – INJECTION CONTROL AND FUEL PUMP

#### FUEL PUMP CONTROL

**Standard Rectifiers**

**V35DM120HM3** – High Current Density, High Voltage Rectifiers
- 35 A, 120 V rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile

**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

**Schottky Rectifiers**

**V35PWM10HM3** – High Current Density, High Voltage Rectifiers
- 35 A, 100 V Schottky rectifiers for freewheeling and rectification
- SlimDPACK (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

**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-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

**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

**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

**SM5S43AT** – 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

**SM6S10AT thru SM6S43AT** – 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

**SM8S10AT thru SM8S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump
- 10000 W clamping power rating for ISO16750-2:2012 Pulse a
- High clamping power capability for load dump protection and freewheeling

**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

**Small Signal Switching Diodes**

**BAV23C** – Fast Switching Dual Diode With Common Cathode
- Silicon epitaxial planar diode

**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

**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

**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-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 × 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 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 ± 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, DiodesAsia@vishay.com, DiodesEurope@vishay.com
### CHASSIS CONTROL

#### ELECTRIC POWER STEERING (BLDC MOTOR DRIVE)

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<th>Component Type</th>
<th>Description</th>
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| **Schottky Rectifiers** | **V35DM120HM3** – High Current Density, High Voltage | - 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 | - 30 A × 2, 100 V Schottky rectifiers for freewheeling and high frequency 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** | **SM5S01AT 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** | **SM6S01AT 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** | **SM8S01AT 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 |
- 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 |
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<td>SlimDPAK (TO-252AE) package with 1.3 mm low profile</td>
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<td><strong>VS-16CDH02HM3</strong> – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode</td>
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<td>• 2 x 8 A, 200 V for high frequency switching, 27 ns recovery, Tjmax = 175 °C</td>
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<td>• Halogen free, 2 % tolerance</td>
<td>• 2 % Zener voltage tolerance</td>
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<td><strong>PLZ Series</strong> – 500 mW Zener Diodes in Low Profile, MicroSMF (DO-219AC) Package Provide Voltage Stabilization</td>
<td></td>
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<tr>
<td>• Very tight Zener voltage tolerances of ± 2.5 %</td>
<td></td>
</tr>
<tr>
<td>• ESD and surge rated</td>
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<td>• Symmetrical leads are wave and reflow solderable</td>
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### CHASSIS CONTROL
**TRANSMISSION ECU, DOUBLE CLUTCH BLDC**

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<td><strong>Schottky Rectifiers</strong></td>
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<tr>
<td>V35DM120HM3</td>
<td>High Current Density, High Voltage Schottky Rectifiers</td>
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<tr>
<td></td>
<td>• 35 A, 120 V Schottky rectifiers for freewheeling and rectification</td>
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<td>• SMPD (TO-263AC) package with 1.8 mm low profile</td>
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<tr>
<td>V60D100CHM3</td>
<td>High Current Density, High Voltage Schottky Rectifiers</td>
</tr>
<tr>
<td></td>
<td>• 30 A x 2, 120 V Schottky rectifiers for freewheeling and rectification</td>
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<td><strong>Small Signal Schottky Diodes</strong></td>
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<tr>
<td>BAT46W</td>
<td>Small Signal Schottky and Switching Diodes in SOD-123 Package</td>
</tr>
<tr>
<td></td>
<td>• Very low turn-on voltage and fast switching</td>
</tr>
<tr>
<td></td>
<td>• Protected by a PN junction guard ring against excessive voltage such as electrostatic discharges</td>
</tr>
<tr>
<td><strong>Standard Rectifiers</strong></td>
<td></td>
</tr>
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<td>MSE1P Series</td>
<td>Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection</td>
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<tr>
<td></td>
<td>• High ESD voltage, current density, and surge current capability</td>
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<td></td>
<td>• MicroSMP (DO-219AD) package with 0.65 mm low profile saves space</td>
</tr>
<tr>
<td><strong>TVS</strong></td>
<td></td>
</tr>
<tr>
<td>SM5S10AT thru SM5S43AT</td>
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<td>• 5000 W clamping power rating for ISO16750-2:2012 Pulse a</td>
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<td>SM6S10AT thru SM6S43AT</td>
<td>High Power Density Uni-Directional TVS for Power Line Load Dump</td>
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<td>• 6000 W clamping power rating for ISO16750-2:2012 Pulse a</td>
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<td>SM8S10AT thru SM8S43AT</td>
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<td>SMC3K Series</td>
<td>High Power Density Bidirectional TVS for Power Line Protection</td>
</tr>
<tr>
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<td>• 3000 W clamping power rating for ISO16750-2:2012 Pulse b</td>
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<td>• Designed for the protection of centralized load dump suppression powertrains</td>
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<td><strong>Ultrafast Rectifiers</strong></td>
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<td>VS-1EFH01HM3</td>
<td>High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode</td>
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<tr>
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<td>• 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C</td>
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<td>• SMF (DO-219AB) package with &lt; 1 mm low profile</td>
</tr>
<tr>
<td>VS-2EHJH01HM3</td>
<td>High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode</td>
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<td></td>
<td>• 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C</td>
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<td>• SlimSMA (DO-221AC) package with 1 mm low profile</td>
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<td>Component</td>
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<td><strong>BZD27B-M Series</strong> – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification</td>
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<td><strong>BZD27C Series</strong> – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification</td>
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<td><strong>BZD27C-M Series</strong> – Zener Diodes in Low Profile SMF (DO-219AB) Package With Surge Current Specification</td>
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BODY ELECTRONICS

COMFORT, DOOR, WINDOW CONTROLS
INFOTAINMENT, NAVIGATION, AUDIO
INTERIOR LED LIGHTING

For technical questions within your region, please contact: DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com
**BODY ELECTRONICS**
**COMFORT, DOOR, WINDOW CONTROLS**

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<td><strong>V20DM120HM3</strong> – High Current Density, High Voltage</td>
<td><strong>V35PWM10HM3</strong> – High Current Density, High Voltage</td>
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</table>
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 × 4 A, 100 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) 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
- 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 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

Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 × 8 A, 200 V for high frequency switching, 27 ns recovery, Tjmax = 175 °C
- SMPD (TO-263AC) package with 1.3 mm low profile

Ultrafast Rectifiers

**VS-8CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 × 12 A, 100 V for high frequency switching, 30 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile

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
- 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 ± 2.5 %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable
### Schottky Rectifiers

**V40D100CHM3** – High Current Density, High Voltage
- 20 A x 2, 120 V Schottky rectifiers for freewheeling and rectification
- SMPD (TO-263AC) package with 1.8 mm low profile

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

**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

**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

### Schottky Rectifiers

**V40D100CHM3** – High Current Density, High Voltage
- 20 A x 2, 120 V Schottky rectifiers for freewheeling and 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

### Standard Rectifiers

**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

**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-1EHF02HM3** – 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

**VS-2EHJH02HM3** – 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, $T_{j\,\max} = 175\,^\circ C$
- SMP (TO-277A) package with 1.1 mm low profile

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- $2 \times 8\,A$, $200\,V$ for high frequency switching, 27 ns recovery, $T_{j\,\max} = 175\,^\circ C$
- 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

**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-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- $2 \times 4\,A$, $200\,V$ for high frequency switching, 22 ns recovery, $T_{j\,\max} = 175\,^\circ C$
- SlimDPAK (TO-252AE) package with 1.3 mm low profile

**VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- $2 \times 4\,A$, $200\,V$ for high frequency switching, 22 ns recovery, $T_{j\,\max} = 175\,^\circ C$
- SlimDPAK (TO-252AE) package with 1.3 mm low profile

**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

**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

**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
BODY ELECTRONICS
INTERIOR LED LIGHTING

**Standard Rectifiers**

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

- 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)

**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

**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 bullet
- Low forward voltage drop and fast switching ideal for protection of MOS devices, steering, biasing, and coupling diodes

**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

**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

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

- 2 × 8 A, 200 V for high frequency switching, 27 ns recovery, Tjmax = 175 °C
- SMPD (TO-263AC) package with 1.3 mm low profile
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<th>Zener Diodes</th>
<th>PLZ Series – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization</th>
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<td>• Very tight Zener voltage tolerances of ± 2.5 %</td>
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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)
### ACTIVE SAFETY

#### ENHANCED ELECTRICAL BRAKING (EEB)

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<th>Schottky Rectifiers</th>
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<tr>
<td><strong>V20DM120HM3</strong> – High Current Density, High Voltage</td>
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<td>• 20 A, 120 V for freewheeling and high frequency rectification</td>
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<td><strong>V40D100CHM3</strong> – High Current Density, High Voltage</td>
</tr>
<tr>
<td>• 20 A × 2, 120 V Schottky rectifiers for freewheeling and rectification</td>
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<tr>
<td><strong>MSE1P Series</strong> – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection</td>
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<tr>
<td>• High ESD voltage, current density, and surge current capability</td>
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<td>• MicroSMP (DO-219AD) package with 0.65 mm low profile saves space</td>
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<th>Small Signal Schottky Diodes</th>
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<td><strong>BAT46W</strong> – Small Signal Schottky and Switching Diodes in SOD-123 Package</td>
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<td>• Very low turn-on voltage and fast switching</td>
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<tr>
<td><strong>1N4448W</strong> – Small Signal Schottky and Switching Diodes in SOD-123 Package</td>
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<tr>
<td>• Silicon epitaxial planar diode</td>
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<td><strong>VS-2EJH01HM3</strong> – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode</td>
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<td>• 3 A, 100 V for high frequency switching, 20 ns recovery, Tjmax = 175 °C</td>
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<tr>
<td><strong>VS-6C5H01HM3</strong> – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode</td>
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<tr>
<td>• 2 × 3 A, 100 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C</td>
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<td>• SMPC (TO-277A) package with 1.1 mm low profile</td>
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<td><strong>SM6S10AT thru SM6S43AT</strong> – High Power Density Uni-Directional TVS for Power Line Load Dump</td>
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<td>• 6000 W clamping power rating for ISO16750-2:2012 Pulse a</td>
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<td>• 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C</td>
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<td><strong>VS-6CSH01HM3</strong> – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode</td>
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<td>• 2 × 3 A, 100 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C</td>
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ACTIVE SAFETY
ENHANCED ELECTRICAL BRAKING (EEB)

Ultrafast Rectifiers

**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 × 4 A, 100 V for high frequency switching, 22 ns recovery, Tjmax = 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

**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

**PLZ Series** – 500 mW Zener Diodes in Low Profile
MicroSMF (DO-219AC) Package Provide Voltage Stabilization
- Very tight Zener voltage tolerances of ± 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 × 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

**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 × 4 A, 100 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile
**ACTIVE SAFETY**

**ELECTRONIC STABILITY PROGRAM (ESP)**

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

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

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

**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
**ACTIVE SAFETY**

**ELECTRONIC STABILITY PROGRAM (ESP)**

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**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

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**Ultrafast Rectifiers**

**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 × 4 A, 100 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
- SlimDPAK (TO-252AE) package with 1.3 mm low profile

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**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
  - 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**

**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 ± 2.5 %
  - ESD and surge rated
  - Symmetrical leads are wave and reflow solderable

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**Ultrafast Rectifiers**

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 × 8 A, 200 V for high frequency switching, 27 ns recovery, Tjmax = 175 °C
- SMPD (TO-263AC) package with 1.3 mm low profile

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**Ultrafast Rectifiers**

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- SlimDPAK (TO-252AE) package with 1.3 mm low profile
ACTIVE SAFETY
VEHICLE STABILITY CONTROL (VSC)

Schottky Rectifiers

V20DM120HM3 – High Current Density, High Voltage

• 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

• 20 A x 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

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

Small Signal Switching Diodes

BAV23C – Fast Switching Dual Diode with Common Cathode

• 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

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

SM5S10AT thru SM5S43AT – 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

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

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• High clamping power capability for load dump protection and freewheeling

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

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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-2EFH01HM3 – 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

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

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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

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

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

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

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• Designed for the protection of centralized load dump suppression powertrains
### Active Safety

**Vehicle Stability Control (VSC)**

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<td>- Halogen free, 2 % tolerance</td>
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<th>Ultrafast Rectifiers</th>
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<td>- 43 breakdown voltages from 3.6 V to 200 V</td>
<td>- Very tight Zener voltage tolerances of ± 2.5 %</td>
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<td>- Halogen free</td>
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### Ultrafast Rectifiers

**VS-6CSH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 x 3 A, 100 V for high frequency switching, 25 ns recovery, $T_{jmax} = 175 \degree C$
- SMPC (TO-277A) package with 1.1 mm low profile

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 x 8 A, 200 V for high frequency switching, 27 ns recovery, $T_{jmax} = 175 \degree C$
- SMPD (TO-263AC) package with 1.3 mm low profile

**VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 x 4 A, 100 V for high frequency switching, 22 ns recovery, $T_{jmax} = 175 \degree C$
- SlimDPAK (TO-252AE) package with 1.3 mm low profile

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

#### ELECTRICAL PARKING BRAKE (EPB)

**Schottky Rectifiers**

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<tr>
<th>V35PWM10HM3 – High Current Density, High Voltage</th>
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<td><strong>Features</strong></td>
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<tr>
<td>• 35 A, 100 V Schottky rectifiers for freewheeling and rectification</td>
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<tr>
<td>• SlimDPAK (TO-252AE) package with 1.3 mm low profile; 120 V and 150 V types available</td>
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**Schottky Rectifiers**

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<thead>
<tr>
<th>V40D100CHM3 – High Current Density, High Voltage</th>
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<td><strong>Features</strong></td>
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<tr>
<td>• 20 A x 2, 120 V Schottky rectifiers for freewheeling and rectification</td>
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<td>• SMPD (TO-263AC) package with 1.8 mm low profile</td>
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**Small Signal Schottky Diodes**

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<th>BAT54 – Single and Dual Construction Protect Against Excessive Voltage</th>
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<td><strong>Features</strong></td>
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<tr>
<td>• Very low turn-on voltage and fast switching</td>
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<td>• PN junction guard ring protects against excessive voltage, such as electrostatic discharges</td>
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**Standard Rectifiers**

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<tr>
<th>MSE1P Series – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection</th>
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<td><strong>Features</strong></td>
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<tr>
<td>• High ESD voltage, current density, and surge current capability</td>
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<tr>
<td>• MicroSMP (DO-219AD) package with 0.65 mm low profile saves space</td>
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**Standard Rectifiers**

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<tr>
<th>SE30AF Series – High Current Density Rectifiers With High ESD Capability for Power Line Protection</th>
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<td><strong>Features</strong></td>
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<td>• High ESD voltage, current density, and surge current capability</td>
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<tr>
<td>• Low profile of 0.95 mm, compatible with SMA (DO-220AC) pad layout</td>
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**TVS**

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<tr>
<th>SM5S10AT thru SM5S43AT – High Power Density Uni-Directional TVS for Power Line Load Dump</th>
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<td><strong>Features</strong></td>
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<td>• 5000 W clamping power rating for ISO16750-2:2012 Pulse a</td>
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<td><strong>Features</strong></td>
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<td>• 8000 W clamping power rating for ISO16750-2: 2012 Pulse a</td>
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<th>SMC3K Series – High Power Density Bidirectional TVS for Power Line Protection</th>
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<td><strong>Features</strong></td>
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<td>• Designed for the protection of centralized load dump suppression powertrains</td>
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**Ultrafast Rectifiers**

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<th>VS-1EH01HM3 – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode</th>
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<td><strong>Features</strong></td>
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<tr>
<td>• 1 A, 100 V for high frequency switching, 17 ns recovery, Tjmax = 175 °C</td>
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<td>• SMF (DO-219AB) package with &lt; 1 mm low profile</td>
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**Ultrafast Rectifiers**

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## Active Safety

### Electrical Parking Brake (EPB)

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<th>SMF (DO-219AB) Package With Surge Current Specification</th>
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### ACTIVE SAFETY

**INTEGRATED PARKING BRAKE (IPB)**

**Schottky Rectifiers**

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

**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

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**MSE1P Series** – Miniature-Package Rectifiers With High ESD Capability for Rail to Rail Signal Line Protection
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- MicroSMP (DO-219AD) package with 0.65 mm low profile saves space

**Schottky 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**

**SMSS10AT 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**

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

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

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- 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

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- 2 × 3 A, 100 V for high frequency switching, 25 ns recovery, Tjmax = 175 °C
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- 2 × 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

**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

**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 × 4 A, 100 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
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- SlimDPAK (TO-252AE) package with 1.3 mm low profile

### Ultrafast Rectifiers

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## ACTIVE SAFETY
### ADVANCED DRIVER ASSISTANCE SYSTEM (ADAS)

### 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

### 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

### 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

### 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
- **VSSAF5M10HM3** – High Current Density, High Voltage
  - 5 A, 100 V Schottky rectifiers for freewheeling and rectification
  - Compatible pad layout to SMA (DO-220AC) with low profile of 0.95 mm

### 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

### 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

### 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

### 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
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PASSIVE SAFETY

AIRBAG CONTROL SYSTEMS
RERAINT SYSTEM POWER SUPPLIES
PEDESTRIAN PROTECTION SYSTEMS

For technical questions within your region, please contact: DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com
### PASSIVE SAFETY
### AIRBAG CONTROL SYSTEMS

#### 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

#### 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

#### Schottky Rectifiers
**VSSAF56HM3** — 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

#### Ultrafast Rectifiers
**VS-2EJH02HM3** — High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 3 A, 200 V for high frequency switching, 20 ns recovery, $T_{jmax} = 175\, ^\circ C$
- SlimSMA (DO-221AC) package with 1 mm low profile

#### TVS
**SMC3K Series** — High Power Density Bidirectional TVS for Power Line Protection
- Designed for the protection of centralized load dump suppression powertrains

#### TVS
**SM6S10AT thru SM8S43AT** — 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

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**SM6S10AT thru SM8S43AT** — High Power Density Uni-Directional TVS for Power Line Load Dump
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## 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

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 × 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
- 43 breakdown voltages from 3.6 V to 200 V
- Halogen free, 2 % tolerance
- Symmetrical leads are wave and reflow solderable

**BZD27C Series** – Zener Diodes in Low Profile
- 43 breakdown voltages from 3.6 V to 200 V
- Symmetrical leads are wave and reflow solderable

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**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
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## 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
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- SMF (DO-219AB) Package With Surge Current Specification
  - 43 breakdown voltages from 3.6 V to 200 V
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**PLZ Series** – 500 mW Zener Diodes in Low Profile
- MicroSMF (DO-219AC) Package Provide Voltage Stabilization
  - Very tight Zener voltage tolerances of ± 2.5 %
  - ESD and surge rated
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<th>Description</th>
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### 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 % Zener voltage tolerance
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#### Pedestrian Protection Systems

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  - 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

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**TVS**

- **SM5S10AT thru SM5S43AT** – High Power Density Uni-Directional TVS for Power Line Load Dump
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- **BAV21WS** – Fast Switching Diode for General Purpose
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- **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

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

### 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

### Zener Diodes
- **BZD27B-M Series** – Zener Diodes in Low Profile
  - 43 breakdown voltages from 3.6 V to 200 V
  - Halogen free, 2 % tolerance
  - Symmetrical leads are wave and reflow solderable

### Ultrafast Rectifiers
- **VS-8CVH01HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
  - 2 × 4 A, 100 V for high frequency switching, 22 ns recovery, Tjmax = 175 °C
  - SlimDPAK (TO-252AE) package with 1.3 mm low profile

### Zener Diodes
- **BZD27C Series** – Zener Diodes in Low Profile
  - 43 breakdown voltages from 3.6 V to 200 V
  - Symmetrical leads are wave and reflow solderable

### Ultrafast Rectifiers
- **VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
  - 2 × 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
  - Very tight Zener voltage tolerances of ± 2.5 %
  - ESD and surge rated
  - Symmetrical leads are wave and reflow solderable

### Zener Diodes
- **BZD27C Series** – Zener Diodes in Low Profile
  - SMF (DO-219AB) Package With Surge Current Specification
  - Very tight Zener voltage tolerances of ± 2.5 %
  - ESD and surge rated
  - 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 ± 2.5 %
  - ESD and surge rated
  - Symmetrical leads are wave and reflow solderable
EXTERIOR LIGHTING

LED HEADLIGHT UNITS
DAY LIGHTING
LED FOG LIGHTING
REAR AND SIGNAL LED LIGHTS

For technical questions within your region, please contact: DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com
### EXTERIOR LIGHTING
#### LED HEADLIGHT UNITS

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**EXTERIOR LIGHTING**

**LED HEADLIGHT UNITS**

**Ultrafast Rectifiers**

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED P® Ultrafast Diode
- 2 × 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

**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

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization
- Very tight Zener voltage tolerances of ± 2.5 %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable
**EXTerior Lighting**

**Day Lighting**

**Schottky Rectifiers**

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

- 8 A, 120 V for freewheeling and high frequency rectification
- SMPA (DO-221BC) package 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

**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**

**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-6C6H02HM3** – 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

**Schottky Rectifiers**

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

- 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**

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

- Silicon epitaxial planar diode
- Fast switching 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**

**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

**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 × 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, $T_{\text{max}} = 175 ^\circ C$
- 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

**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

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

**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

### PLZ Series

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization
- Very tight Zener voltage tolerances of ± 2.5 %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable
## EXTERIOR LIGHTING

### LED FOG LIGHTING

### Schottky Rectifiers

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

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

### 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

### Schottky Rectifiers

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

- 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

### 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

### Small Signal Switching Diodes

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

- Silicon epitaxial planar diode

### TVS

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

- 3000 W clamping power rating for ISO16750-2:2012 Pulse
- 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

**V8PAM12HM3** – 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

### 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

### 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-8CWH02HM3** – 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
EXTERIOR LIGHTING
LED FOG LIGHTING

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

**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

**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
- Symmetrical leads are wave and reflow solderable

Ultrafast Rectifiers

**VS-16CDH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 × 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

**PLZ Series** – 500 mW Zener Diodes in Low Profile
MicroSMF (DO-219AC) Package Provide Voltage Stabilization
- Very tight Zener voltage tolerances of ± 2.5 %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable
## EXTERIOR LIGHTING
### REAR AND SIGNAL LED LIGHTS

### Schottky Rectifiers

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

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

### 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-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

### 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

### 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

### 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

### Schottky Rectifiers

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

- 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

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

- 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

**TPSBM 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-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 P® Ultrafast Diode

- 2 × 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


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

**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 ± 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, DiodesAsia@vishay.com, DiodesEurope@vishay.com
### 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, $T_{\text{Jmax}} = 175 ^\circ\text{C}$
- SlimSMA (DO-221AC) package with 1 mm low profile

**VS-8CVH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 2 x 4 A, 200 V for high frequency switching, 22 ns recovery, $T_{\text{Jmax}} = 175 ^\circ\text{C}$
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- 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

**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

**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

**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 ± 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

**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-1EFH02HM3** – High Current Density, Soft Recovery, FRED Pt® Ultrafast Diode
- 1 A, 200 V for high frequency switching, 17 ns recovery, $T_{jmax}$ = 175 °C
- SMF (TO-219AB) package with < 1 mm low profile

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

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

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- 43 breakdown voltages from 3.6 V to 200 V
- 2 % Zener voltage tolerance
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**48 VDC BOARDNET**

**DC/DC CONVERTERS, BIDIRECTIONAL (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

**Small Signal Switching Diodes**

**1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package
- Silicon epitaxial planar diode
- Fast switching diode

**Small Signal Switching Diodes**

**1N4444W** – Small Signal Schottky and Switching Diodes in SOD-123 Package
- Silicon epitaxial planar diode
- Fast switching diode

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**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

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**Small Signal Schottky Diodes**

**BAT54W** – 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**

**1N4449W** – Small Signal Schottky and Switching Diodes in SOD-123 Package
- Silicon epitaxial planar diode
- Fast switching diode

**Small Signal Switching Diodes**

**1N4446W** – Small Signal Schottky and Switching Diodes in SOD-123 Package
- Silicon epitaxial planar diode
- Fast switching 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

**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

---

**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

**Small Signal Switching Diodes**

**1N4444W** – Small Signal Schottky and Switching Diodes in SOD-123 Package
- Silicon epitaxial planar diode
- Fast switching 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

**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

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**Small Signal Schottky Diodes**

**BAT54W** – 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**

**1N4449W** – Small Signal Schottky and Switching Diodes in SOD-123 Package
- Silicon epitaxial planar diode
- Fast switching diode

**Small Signal Switching Diodes**

**1N4446W** – Small Signal Schottky and Switching Diodes in SOD-123 Package
- Silicon epitaxial planar diode
- Fast switching 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

**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
### Zener Diodes

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

**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

**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

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization
- 500 mW power dissipation, excellent thermal characteristics, $R_{thJA} 130 \text{k}\Omega$
- Symmetrical leads are wave and reflow solderable
48 VDC BOARDNET
HVAC (E-COMPRESSOR FOR 48 VDC)

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-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-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
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

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

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

- $2 \times 8$ A, 200 V for high frequency switching, 27 ns recovery, $T_{j,\text{max}} = 175$ °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

**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
- 2 % Zener voltage tolerance
- Symmetrical leads are wave and reflow solderable


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

**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

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

- Very tight Zener voltage tolerances of ± 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, DiodesAsia@vishay.com, DiodesEurope@vishay.com
### Ultrafast Rectifiers

**VS-16EDU06HM3** – High Current Density FRED Pt®
- 16 A, 600 V with low VF for high efficiency OBC
- Soft recovery, $T_{j, \text{max}} = 175 \, ^\circ\text{C}$, SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified

**VS-ETH1506SHM3** – High Current Density FRED Pt®
- 15 A, 600 V with low $Q_r$ for high frequency OBC
- Soft recovery, $T_{j, \text{max}} = 175 \, ^\circ\text{C}$, D²PAK (TO-263AB) package, AEC-Q101 qualified

**VS-ETH3006SHM3** – High Current Density FRED Pt®
- 30 A, 600 V, low $Q_r$ for high frequency OBC
- Soft recovery, $T_{j, \text{max}} = 175 \, ^\circ\text{C}$, SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified

**VS-ETH3007THN3** – High Current Density FRED Pt® in Through-Hole TO-220AC 2 Pin Package
- 30 A, 650 V, low $Q_r$ for high efficiency OBC
- Soft recovery, $T_{j, \text{max}} = 175 \, ^\circ\text{C}$, AEC-Q101 qualified

### 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

**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

**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

**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

### 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

**1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package
- Silicon epitaxial planar diode
- Fast switching diode

**1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package
- Silicon epitaxial planar diode
- Fast switching diode

**1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package
- Silicon epitaxial planar diode
- Fast switching diode
FULL HYBRID VEHICLES (HEVs)
ELECTRICAL MOTOR DRIVES (DC/AC)

Ultrafast Rectifiers
**VS-ETX3007THN3** – High Current Density FRED Pt®
Ultrafast Rectifiers in Through-Hole TO-220AC 2 Pin Package
- 30 A, 600 V, lowest Qrr, for high frequency OBC
- Soft recovery, Tj 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
- 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 ± 2.5 %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable

Ultrafast Rectifiers
**VS-ETX3007THN3** – High Current Density FRED Pt®
Ultrafast Rectifiers in Through-Hole TO-220AC 2 Pin Package
- 30 A, 600 V, lowest Qrr, for high frequency OBC
- Soft recovery, Tj max = 175 °C, AEC-Q101 qualified
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, DiodesAsia@vishay.com, DiodesEurope@vishay.com
## FULL ELECTRIC VEHICLES (FEVs)

### ELECTRICAL MOTOR DRIVES (DC/AC)

### 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

**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-16EDU06HM3** – High Current Density FRED Pt®
- 16 A, 600 V with low VF for high efficiency OBC
- Soft recovery, Tjmax = 175 °C, SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified

**VS-ETH1506SHM3** – High Current Density FRED Pt®
- 15 A, 600 V with low Qrr for high frequency OBC
- Soft recovery, Tjmax = 175 °C, D²PAK (TO-263AB) package, AEC-Q101 qualified

**VS-ETH3006SHM3** – High Current Density FRED Pt®
- 30 A, 600 V, low Qrr for high frequency OBC
- Soft recovery, Tjmax = 175 °C, D²PAK (TO-263AB) package, AEC-Q101 qualified

**VS-ETH3007THN3** – High Current Density FRED Pt®
- 30 A, 650 V, low Qrr for high efficiency OBC
- Soft recovery, Tjmax = 175 °C, AEC-Q101 qualified

### 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

**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

### 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

**BAT46W**

**1N4448W** – Small Signal Schottky and Switching Diodes in SOD-123 Package
- Silicon epitaxial planar diode
- Fast switching diode

**1N4448W**
FULL ELECTRIC VEHICLES (FEVs)
ELECTRICAL MOTOR DRIVES (DC/AC)

Ultrafast Rectifiers
VS-ETX3007THN3 – High Current Density FRED Pt®
Ultrafast Rectifiers in Through-Hole TO-220AC 2-Pin Package
• 30 A, 600 V, lowest Qr, for high frequency OBC
• Soft recovery, Tj max = 175 °C, AEC-Q101 qualified

Zener Diodes
• 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 ± 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
- $T_J = 185^\circ C$, 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®
- 30 A, 600 V, low VF for high efficiency OBC
- Soft recovery, $T_{jmax} = 175^\circ C$, SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified

**VS-ETH3006SHM3** – High Current Density FRED Pt®
- 30 A, 600 V, low $Q_{rr}$ for high frequency OBC
- Soft recovery, $T_{jmax} = 175^\circ C$, D²PAK (TO-263AB) package, AEC-Q101 qualified

**VS-ETX3007THN3** – High Current Density FRED Pt®
- 30 A, 600 V, lowest $Q_{rr}$ for high frequency OBC
- Soft recovery, $T_{jmax} = 175^\circ C$, AEC-Q101 qualified

**VS-ETH3007THN3** – High Current Density FRED Pt®

**VS-ETH1506SHM3** – High Current Density FRED Pt®
- 15 A, 600 V with low $Q_r$ for high frequency OBC
- Soft recovery, $T_{jmax} = 175^\circ C$, D²PAK (TO-263AB) package, AEC-Q101 qualified

**VS-16EDU06HM3** – High Current Density FRED Pt®
- 16 A, 600 V with low VF for high efficiency OBC
- Soft recovery, $T_{jmax} = 175^\circ C$, SMPD (TO-263AC) package with 1.3 mm low profile, AEC-Q101 qualified

**VS-ETX3007THN3** – High Current Density FRED Pt®

**VS-ETH3007THN3** – High Current Density FRED Pt®
- 30 A, 650 V, low $Q_{rr}$ for high efficiency OBC
- Soft recovery, $T_{jmax} = 175^\circ C$, AEC-Q101 qualified

**VS-ETH3007THN3** – High Current Density FRED Pt®
- 30 A, 600 V, lowest $Q_{rr}$ for high frequency OBC
- Soft recovery, $T_{jmax} = 175^\circ C$, 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-ETH1506SHM3** – High Current Density FRED Pt®

**VS-ETH1506SHM3** – High Current Density FRED Pt®

**VS-ETX3007THN3** – High Current Density FRED Pt®

**VS-ETX3007THN3** – High Current Density FRED Pt®
- 30 A, 650 V, low $Q_r$ for high efficiency OBC
- Soft recovery, $T_{jmax} = 175^\circ C$, AEC-Q101 qualified

**VS-ETX3007THN3** – High Current Density FRED Pt®
- 30 A, 600 V, lowest $Q_{rr}$ for high frequency OBC
- Soft recovery, $T_{jmax} = 175^\circ C$, 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
- Symmetrical leads are wave and reflow solderable

**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

**PLZ Series** – 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) Package Provide Voltage Stabilization
- Very tight Zener voltage tolerances of ± 2.5 %
- ESD and surge rated
- Symmetrical leads are wave and reflow solderable

### Zener Diodes

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

**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
- Symmetrical leads are wave and reflow solderable
### Full Electric Vehicles (FEVs)

#### On-Board Chargers

**Ultrafast Rectifiers**

- **VS-30CDU06HM3** – High Current Density FRED Pt®
  - 30 A, 600 V, low Qrr for high frequency OBC
  - Soft recovery, Tj max = 175 °C, SMPD (TO-263AC) package, AEC-Q101 qualified

- **VS-ETH3007THN3** – High Current Density FRED Pt®
  - 30 A, 600 V, lowest Qrr for high frequency OBC
  - Soft recovery, Tj max = 175 °C, AEC-Q101 qualified

- **VS-ETH3006SHM3** – High Current Density FRED Pt®
  - 30 A, 600 V, low Qrr for high frequency OBC
  - Soft recovery, Tj max = 175 °C, D 2PAK (TO-263AB) package, AEC-Q101 qualified

**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

- **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

**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

**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

- **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

- **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

- **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 ± 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, DiodesAsia@vishay.com, DiodesEurope@vishay.com
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<th>ESD Protection</th>
<th>GSOTxx-Series – 1-Line Uni-Directional Protection Diode in SOT23 Package</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>• Working range from 3 V up to 36 V; ± 30 kV contact discharge; ± 30 kV air discharge</td>
</tr>
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<td></td>
<td>• Very common SOT23 package</td>
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<th>SMF-Series – Uni-Directional ESD Protection Diode in Low Profile SMF (DO-219AB)</th>
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<tr>
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<td>• Devices offer low 1 mm profile, low noise technology, fast response times</td>
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<th>ESD Protection</th>
<th>VCAN26A2-03S – 2-Line Bidirectional Protection Diode in Small-Size SOT323 Package</th>
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<tbody>
<tr>
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<td>• Working range of ± 26.5 V; low leakage current IR &lt; 0.05 μA</td>
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<tr>
<td></td>
<td>• Low load capacitance CD &lt; 13 pF</td>
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<td></td>
<td>• CAN BUS related performance in smallest SOT323 package</td>
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<td>• Working range of ± 16 V; low leakage current IR &lt; 0.05 μA</td>
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<tr>
<td></td>
<td>• Low load capacitance CD &lt; 24 pF</td>
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<td></td>
<td>• Working range of ± 26.5 V; low leakage current IR &lt; 0.05 μA</td>
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<tr>
<td></td>
<td>• Low load capacitance CD &lt; 13 pF</td>
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<td>• Compact SOD-323 package measures only 1.95 mm x 1.5 mm with low 0.95 mm profile</td>
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<td>• LIN BUS related performance in smallest SOT23 package</td>
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<tr>
<th>ESD Protection</th>
<th>VBUS05B1-SD0 – Uni-Directional low Cap ESD Protection Diode in Tiny CLP0603 Package</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>• Capacitance down to 0.29 pF typical</td>
</tr>
<tr>
<td></td>
<td>• 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</td>
</tr>
</tbody>
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<tr>
<th>ESD Protection</th>
<th>GSOTxxC-Series – 2-Line Uni-Directional Protection Diode in SOT23 Package</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>• Working range from 3 V up to 36 V; ± 30 kV contact discharge; ± 30 kV air discharge</td>
</tr>
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<td>• Very common SOT23 package</td>
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<th>SMF-Series – Uni-Directional ESD Protection Diode in Low Profile SMF (DO-219AB)</th>
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<tbody>
<tr>
<td></td>
<td>• Devices offer low 1 mm profile, low noise technology, fast response times</td>
</tr>
<tr>
<td></td>
<td>• Symmetrical leads are wave and reflow solderable</td>
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</tbody>
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<tr>
<th>ESD Protection</th>
<th>VLIN1616-02G – 1-Line Bidirectional Protection Diode in Small-Size SOD323 Package</th>
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<tbody>
<tr>
<td></td>
<td>• Working range of ± 16 V; low leakage current IR &lt; 0.05 μA</td>
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<tr>
<td></td>
<td>• Low load capacitance CD &lt; 24 pF</td>
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<td>• Feature a 2 % breakdown voltage tolerance, low 1 mm profile, low noise technology, and fast response times</td>
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