

FRED Pt® Gen 7 Hyperfast Rectifiers

1 A and 2 A, 1200 V Rectifiers in eSMP® Series Compact Low Profile SMF (DO-219AB) Package



ADVANTAGE

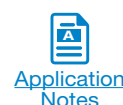
Lowering switching losses, devices combine low Q_{rr} down to 105 nC with V_F of 1.45 V, while reducing parasitic capacitance and recovery time

KEY PRODUCT FEATURES

- ✓ SMF (DO-219AB) package: 3.7 mm x 1.8 mm x 1.0 mm
- ✓ Fast recovery times down to 45 ns
- ✓ Low forward voltage drop down to 1.45 V
- ✓ Junction capacitance down to 3.0 pF
- ✓ Non-repetitive peak surge current up to 21 A
- ✓ High temperature operation to +175 °C
- ✓ AEC-Q101 qualified available



RESOURCES



MARKETS AND APPLICATIONS



MOBILITY

- Automotive electrification (e-powertrain)
- Transportation
- Agricultural equipment



ENERGY SECTOR

- Generation and exploration
- Storage



INDUSTRIAL

- Drives and tools
- Infrastructure



ADDITIONAL BENEFITS

The devices will serve as clamp, snubber, and freewheeling diodes in flyback auxiliary power supplies and high frequency rectifiers for bootstrap driver functionality, while providing desaturation protection for the latest fast switching IGBTs and high voltage Si / SiC MOSFETs. The rectifiers feature a planar structure and platinum doped lifetime control that guarantee system reliability and robustness without compromising on performance, while their optimized stored charge and low recovery current minimize switching losses and reduce power dissipation.

Key Specifications

Part Number	VS-E7FX0112-M3	VS-E7FX0112HM3	VS-E7FX0212-M3	VS-E7FX0212HM3
$I_{F(AV)}$	1 A	1 A	2 A	2 A
V_R	1200 V			
V_F at I_F	1.45 V	1.45 V	1.60 V	1.60 V
t_{rr}	50 ns	50 ns	45 ns	45 ns
Q_{rr}	105 nC	105 nC	165 nC	165 nC
CT	3.0 pF	3.0 pF	3.5 pF	3.5 pF
I_{FSM}	14 A	14 A	21 A	21 A
Package	SMF (DO-219AB)			
AEC-Q101	No	Yes	No	Yes