



Vishay Intertechnology Releases New 1 A, 2 A, and 3 A Gen 7 1200 V FRED Pt® Hyperfast Rectifiers in SMPC HV Package

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Reducing Switching Losses and Increasing Efficiency, Devices Combine Low Qrr Down to 105 nC and VF Down to 1.45 V With Low Junction Capacitance, Fast Recovery Time, and Minimum Creepage Distance of 5.4 mm

MALVERN, Pa., June 16, 2026 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today expanded its Gen 7 platform of 1200 V FRED Pt® Hyperfast rectifiers with six new devices in the eSMP® series SMPC HV package. Optimized for industrial, automotive, and energy applications, the 1 A, 2 A, and 3 A rectifiers not only offer the best trade-off between reverse recovery charge (Q_{rr}) and forward voltage drop for devices in their class, but also provide the lowest junction capacitance and recovery time.

The Vishay Semiconductors rectifiers released today include the [VS-E7SX0112-M3V](#), [VS-E7SX0212-M3V](#), and [VS-E7SX0312-M3V](#), and AEC-Q101 qualified [VS-E7SX0112HM3V](#), [VS-E7SX0212HM3V](#), and [VS-E7SX0312HM3V](#). To reduce switching losses and increase efficiency, the devices combine a fast recovery time of 50 ns with Q_{rr} down to 105 nC typical, forward voltage drop down to 1.45 V, and junction capacitance down to 7.25 pF. The robust rectifiers offer non-repetitive peak surge current up to 70 A in a compact package measuring 4.3 mm x 6.5 mm with a low 1.1 mm profile, which is footprint-compatible with the TO-277A. Combined with a minimum 5.4 mm creepage distance and molding compound with a comparative tracking index (CTI) ≥ 600 (Material Group I), the devices reduce component counts and lower BOM costs based on IEC 60664-1 requirements for high voltage applications.

The VS-E7SX0112-M3V, VS-E7SX0212-M3V, VS-E7SX0312-M3V, VS-E7SX0112HM3V, VS-E7SX0212HM3V, and VS-E7SX0312HM3V 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. Typical applications for the devices include industrial drives and tools, on-board chargers and motors for electric vehicles (EV), energy generation and storage systems, and Ćuk converters and industrial LED SEPIC circuitry.

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. RoHS-compliant and halogen-free, the devices feature a Moisture Sensitivity Level of 1 in accordance with J-STD-020 and offer high temperature operation to +175 °C.

Device Specification Table:

Part #	I _{F(AV)} (A)	V _R (V)	V _F at I _F (V)	t _{rr} (ns)	Q _{rr} (nC)	C _T (pF)	I _{FSM} (A)	Package	AEC-Q101
VS-E7SX0112-M3V	1	1200	1.45	50	105	7.25	19	SMPC HV	No
VS-E7SX0112HM3V	1		1.45		105	7.25	19		Yes
VS-E7SX0212-M3V	2		1.6		165	9.0	21		No
VS-E7SX0212HM3V	2		1.6		165	9.0	21		Yes
VS-E7SX0312-M3V	3		1.45		240	20	70		No
VS-E7SX0312HM3V	3		1.45		240	20	70		Yes

Samples and production quantities of the new Gen 7 rectifiers are available now, with a lead time of eight weeks.

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Vishay manufactures one of the world's largest portfolios of discrete semiconductors and passive electronic components that are essential to innovative designs in the automotive, industrial, computing, consumer, telecommunications, military, aerospace, and medical markets. Serving customers worldwide, Vishay is **The DNA of tech**®. Vishay Intertechnology, Inc. is a Fortune 1000 Company listed on the NYSE (VSH). More on Vishay at www.Vishay.com.

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Links to product datasheets:

<http://www.vishay.com/ppg?97470> (VS-E7SX0112-M3V)
<http://www.vishay.com/ppg?97387> (VS-E7SX0112HM3V)
<http://www.vishay.com/ppg?97471> (VS-E7SX0212-M3V)
<http://www.vishay.com/ppg?97389> (VS-E7SX0212HM3V)
<http://www.vishay.com/ppg?97472> (VS-E7SX0312-M3V)
<http://www.vishay.com/ppg?97390> (VS-E7SX0312HM3V)

Link to product photo:

<https://www.flickr.com/photos/vishay/albums/72177720334175564>

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