VS-E7MH0112-M3 and VS-E7MH0112HM3 Gen 7
1200 V, 1 A FRED Pt® Hyperfast Rectifiers in SMA
(DO-214AC) Package Offer Low Q_{rr} Down to 150 nC
and V_F of 1.10 V for Industrial and Automotive
Applications, While Reducing Parasitic Capacitance
and Improving E_{rec}

Product Benefits:
- Offered in the SMA (DO-214AC) package
- AEC-Q101 qualified (VS-E7MH0112HM3)
- Fast recovery time of 75 ns
- Low Q_{rr} down to 150 nC typical
- Low 1.10 V typical forward voltage drop
- Improved reverse recovery energy (E_{rec})
- High temperature operation to +175 °C
- Moisture Sensitivity Level of 1 in accordance with J-STD-020
- RoHS-compliant and halogen-free

Market Applications:
- Clamp, snubber, and freewheeling diodes in flyback auxiliary power supplies and high frequency rectifiers for
  bootstrap driver functionality
- Desaturation protection for the latest fast switching IGBTs and Si / SiC MOSFETs
- Industrial and telecom equipment, on-board chargers and motors for electric vehicles (EV), and CUK and
  SEPIC circuits for LED lighting

The News:
Vishay Intertechnology introduces the first two devices in its new Gen 7 platform of 1200 V FRED Pt® Hyperfast
rectifiers. Offered in the SMA (DO-214AC) package, the 1 A rectifiers offer the best trade-off between reverse
recovery charge (Q_{rr}) and forward voltage drop for devices in their class. Optimized for industrial and automotive
applications, the Vishay Semiconductors VS-E7MH0112-M3 and AEC-Q101 qualified VS-E7MH0112HM3 are
designed to increase the efficiency of auxiliary functions and low power stages for AC/DC and DC/DC converters.
- Compared to the closest competing device on the market, the VS-E7MH0112-M3 and VS-E7MH0112HM3 offer
  a 10 % lower typical forward voltage drop, while achieving 50 % lower parasitic capacitance without
  compromising device reliability
- The rectifiers deliver a 10 % improvement in reverse recovery energy (E_{rec}) compared to previous-generation
  solutions, and offer a softer recovery tail for improved EMI reduction
- The devices 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

© 2023 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED.
The Key Specifications:

- Blocking voltage: 1200 V
- Forward current: 1 A
- Reverse recovery time: 75 ns
- Typical $Q_{rr}$ at +25°C: 150 nC
- Typical forward voltage drop at 1 A and +150 °C: 1.10 V
- Package: SMA (DO-214AC)
- Operating temperature range: -55 °C to +175 °C

Availability:
Samples and production quantities of the new Gen 7 devices are available now, with a lead time of 20 weeks.

To access the product datasheets on the Vishay Website, go to
http://www.vishay.com/ppg?96892 (VS-E7MH0112HM3)
http://www.vishay.com/ppg?96673 (VS-E7MH0112-M3)

Contact Information:

<table>
<thead>
<tr>
<th>The Americas</th>
<th>Europe</th>
<th>Asia/Pacific</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:Diodes-Americas@vishay.com">Diodes-Americas@vishay.com</a></td>
<td><a href="mailto:Diodes-Europe@vishay.com">Diodes-Europe@vishay.com</a></td>
<td><a href="mailto:Diodes-Asia@vishay.com">Diodes-Asia@vishay.com</a></td>
</tr>
</tbody>
</table>