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## New FRED Pt<sup>®</sup> Ultrafast Rectifiers in FlatPAK<sup>™</sup> 5x6 Package Increase Power Density, Performance Efficiency, and Device Reliability

***Available in Automotive Grade and Commercial / Industrial Versions, 200 V Devices Feature Low < 1 mm Profile, up to 8 A Separate Cathode Configuration***

### Product Benefits:

- 200 V reverse voltage
- Feature FlatPAK 5x6 package with low profile of < 1 mm
- 2000 hours of high temperature reverse bias (HTRB) testing guarantees long term reliability
- Offered in Automotive Grade and commercial / industrial versions
- High forward current ratings of 6 A (2 x 3 A) and 8 A (2 x 4 A)
- Ultrafast recovery times down to 25 ns
- Low reverse recovery charge
- Soft recovery features
- Operating temperature range of -55 °C to +175 °C
- Low forward voltage drop down to 0.7 V
- MSL moisture sensitivity level of 1, per J-STD-020, LF maximum peak of +260 °C
- RoHS-compliant and halogen-free



### Market Applications:

- DC/DC converters
  - AEC-Q101 rectifiers: automotive engine control units (ECU), anti-lock braking systems (ABS), and HID and LED lighting
  - Commercial / industrial rectifiers: telecom power supplies



## The News:

Vishay Intertechnology introduces new 200 V FRED Pt Ultrafast recovery rectifiers in the thermally efficient FlatPAK 5x6 package with a low profile of < 1 mm. With long term reliability assured through 2000 hours of high temperature reverse bias (HTRB) testing, the commercial / industrial VS-6DKH02-M3 and VS-8DKH02-M3 and Automotive Grade VS-6DKH02HM3 and VS-8DKH02HM3 deliver high power density and efficiency for automotive and telecom applications.

- Configured as dual-die rectifiers with separate cathode connections
  - Allow designers to simplify PCB layouts by utilizing one package instead of two smaller ones
- Vishay's FlatPAK features the standard footprint of 5 x 6 QFN (quad flat no lead) packages widely used already by other technologies, such as MOSFETs, and allows for different circuit topologies
- Low forward voltage drop reduces power losses and improves efficiency
- Ideal for automated placement and allow for automated optical inspection (AOI) in automotive systems

## The Key Specifications:

Part number	VS-6DKH02-M3	VS-6DKH02HM3	VS-8DKH02-M3	VS-8DKH02HM3
Forward current	2 x 3 A	2 x 3 A	2 x 4 A	2 x 4 A
Forward voltage	0.71 V	0.71 V	0.7 V	0.7 V
t <sub>rr</sub>	25 ns	25 ns	25 ns	25 ns
AEC-Q101	No	Yes	No	Yes

### Availability:

Samples and production quantities of the VS-6DKH02-M3, VS-6DKH02HM3, VS-8DKH02-M3, and VS-8DKH02HM3 are available now, with lead times of 12 to 14 weeks for large orders.

To access the product datasheets on the Vishay Website, go to:

- <http://www.vishay.com/ppg?96082> (VS-6DKH02-M3)
- <http://www.vishay.com/ppg?96086> (VS-6DKH02HM3)
- <http://www.vishay.com/ppg?96090> (VS-8DKH02-M3)
- <http://www.vishay.com/ppg?96088> (VS-8DKH02HM3).

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