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New FRED Pt[®] Ultrafast Rectifiers in SlimDPAK Save Space, Increase Power Density, Improve Thermal Performance

Available in Automotive Grade and Commercial / Industrial Versions, 200 V and 600 V Devices Feature Low 1.3 mm Profile, Forward Currents to 15 A

Product Benefits:

- Reverse voltages of 200 V and 600 V
- Feature SlimDPAK (TO-252AE) package with low 1.3 mm profile
- Offered in Automotive Grade and commercial / industrial versions
- High forward current ratings to 10 A for 200 V rectifiers and 15 A for 600 V rectifiers
- Ultrafast recovery times down to 14 ns
- Low reverse recovery charge
- Soft recovery features
- Operating temperature range of -55 °C to +175 °C
- Low forward voltage drop down to 0.71 V at 4 A
- 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: 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 13 new 200 V and 600 V FRED Pt Ultrafast recovery rectifiers in the eSMP[®] series SlimDPAK (TO-252AE) package, each available in Automotive Grade and commercial / industrial versions. Offering lower profiles and better thermal performance than devices in the DPAK (TO-252AA), the Vishay Semiconductors rectifiers deliver high power density and efficiency for automotive and telecom applications.

- Footprint-compatible with the DPAK package, the devices' profile is 43 % lower to enable slimmer end products, while their heatsink area is 14 % larger for lower thermal resistance
- 15 A rectifiers provide an alternative to devices in the D2PAK (TO-263AB) package
- 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	I _{F(AV)} (A)	V _{BR} (V)	V _F (V)	@ I _F (A)	t _{rr} (ns)	I _{FSM} (A)	T _J max. (°C)	AEC- Q101
VS-4EVH02HM3	4	200	0.71	4	16	100	175	Y
VS-4EVH02-M3	4	200	0.71	4	16	100	175	N
VS-6CVH02HM3	2 x 3	200	0.75	3	20	140	175	Y
VS-6CVH02-M3	2 x 3	200	0.75	3	16	100	175	N
VS-8CVH02HM3	2 x 4	200	0.71	4	16	200	175	Y
VS-8CVH02-M3	2 x 4	200	0.71	4	16	200	175	N
VS-10CVH02HM3	2 x 5	200	0.74	5	16	200	175	Y
VS-10CVH02-M3	2 x 5	200	0.74	5	16	200	175	N
VS-6EVL06HM3	6	600	0.98	6	34	80	175	Y
VS-6EVL06-M3	6	600	0.98	6	34	80	175	N
VS-6EVH06HM3	6	600	1.26	6	16	70	175	Y
VS-6EVH06-M3	6	600	1.26	6	16	70	175	N
VS-6EVX06HM3	6	600	1.65	6	14	50	175	Y
VS-6EVX06-M3	6	600	1.65	6	14	50	175	N
VS-8EVL06HM3	8	600	0.98	8	34	130	175	Y
VS-8EVL06-M3	8	600	0.98	8	34	130	175	N
VS-8EVH06HM3	8	600	1.30	8	16	90	175	Y
VS-8EVH06-M3	8	600	1.30	8	16	90	175	N
VS-8EVX06HM3	8	600	1.40	8	14	80	175	Y
VS-8EVX06-M3	8	600	1.40	8	14	80	175	N
VS-15EVL06HM3	15	600	0.98	15	38	180	175	Y
VS-15EVL06-M3	15	600	0.98	15	38	180	175	N
VS-15EVU06HM3	15	600	1.10	15	26	160	175	Y
VS-15EVU06-M3	15	600	1.10	15	26	160	175	N
VS-15EVH06HM3	15	600	1.20	15	20	120	175	Y
VS-15EVH06-M3	15	600	1.20	15	20	120	175	N

Availability:

Samples and production quantities of the new Ultrafast rectifiers will be available in September 2017, with lead times of 8 to 10 weeks for large orders.

To access the product datasheets on the Vishay Website, go to <http://www.vishay.com/diodes/rectifiers/ultrafast-recovery/slimdpak/>

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