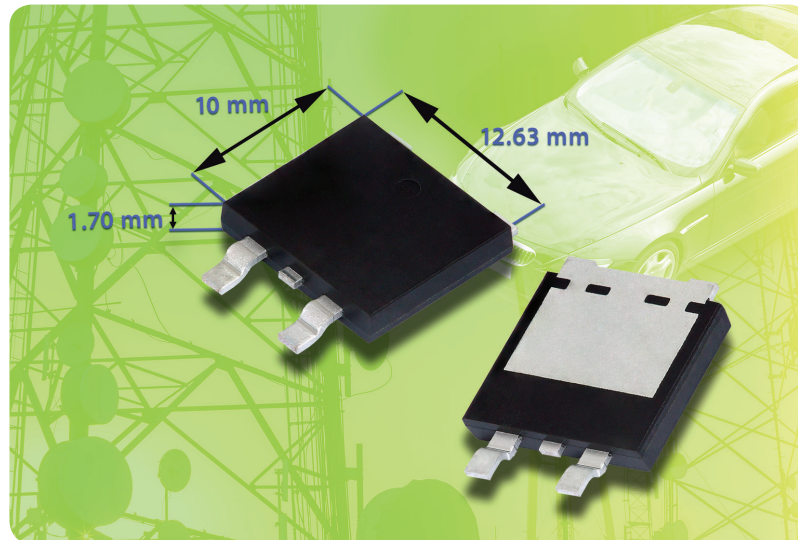


10 A to 30 A FRED Pt[®] Rectifiers in SMPD Package Offer Increased Power Density and System Efficiency for Automotive and Telecom Applications



KEY BENEFITS

- Low-profile SMPD (TO-263AC) package
 - Footprint compatible with D²PAK (TO-263) package
- Low leakage currents
- Low forward voltage drop down to 0.75 V typical
- Fast reverse recovery time down to 25 ns
- Available in AEC-Q101-qualified and standard versions
- High operating temperature up to +175 °C
- RoHS-compliant and halogen-free

APPLICATIONS

- DC/DC converters, power factor correction (PFC), low-voltage inverters, and chopper motor drives in automotive engine control units (ECUs), anti-lock braking systems (ABS), LED lighting, and HID lighting, in addition to telecom DC/DC bricks

RESOURCES

- Datasheets: see next page
- For technical questions contact DiodesAmericas@vishay.com, DiodesEurope@vishay.com, or DiodesAsia@vishay.com
- Material categorization: For definitions of compliance, please see <http://www.vishay.com/doc?99912>



**RECTIFIERS****FRED Pt[®] Rectifiers**

The 10 A to 30 A FRED Pt Hyperfast and Ultrafast recovery rectifiers in the low-profile SMPD (TO-263AC) package combine extremely fast and soft recovery characteristics with low leakage current and low forward voltage drop. The rectifiers reduce switching losses and over-dissipation in automotive and telecom applications.

- Provide a high-density alternative to the TO-263 (D²PAK) package
- Feature a planar structure and platinum-doped lifetime control to guarantee high overall performance, ruggedness, and reliability characteristics
- Offer an operating junction temperature from -65 °C to +175 °C for a more robust design

KEY SPECIFICATIONS

PART #	TYPE	DIODE VARIATION	I _{F(AV)} (A)	V _R	V _F TYP	TRR TYP. (NS)	AEC-Q101
				(V)	@ RATED I (V)		
VS-10CDH06HM3	Hyperfast	Dual	2 x 5	600	1	35	Yes
VS-10CDH06-M3	Hyperfast	Dual	2 x 5	600	1	35	No
VS-12CDU06HM3	Ultrafast	Dual	2 x 6	600	0.89	45	Yes
VS-12CDU06-M3	Ultrafast	Dual	2 x 6	600	0.89	45	No
VS-16CDH02HM3	Hyperfast	Dual	2 x 8	200	0.77	27	Yes
VS-16CDH02-M3	Hyperfast	Dual	2 x 8	200	0.77	27	No
VS-16CDU06HM3	Ultrafast	Dual	2 x 8	600	0.94	45	Yes
VS-16CDU06-M3	Ultrafast	Dual	2 x 8	600	0.94	45	No
VS-16EDH02HM3	Hyperfast	Single	16	200	0.75	32	Yes
VS-16EDH02-M3	Hyperfast	Single	16	200	0.75	32	No
VS-16EDU06HM3	Ultrafast	Single	16	600	0.91	55	Yes
VS-16EDU06-M3	Ultrafast	Single	16	600	0.91	55	No
VS-20CDH02HM3	Hyperfast	Dual	2 x 10	200	0.77	25	Yes
VS-20CDH02-M3	Hyperfast	Dual	2 x 10	200	0.77	25	No
VS-30CDU06HM3	Ultrafast	Dual	2 x 15	600	0.9	55	Yes
VS-30CDU06-M3	Ultrafast	Dual	2 x 15	600	0.9	55	No

With a footprint compatible with the TO-263 (D²PAK) package, the FRED Pt Hyperfast and Ultrafast recovery rectifiers in the SMPD (TO-263AC) package offer a lower package height of < 1.7 mm for increased power density and efficiency to enable slimmer end products.