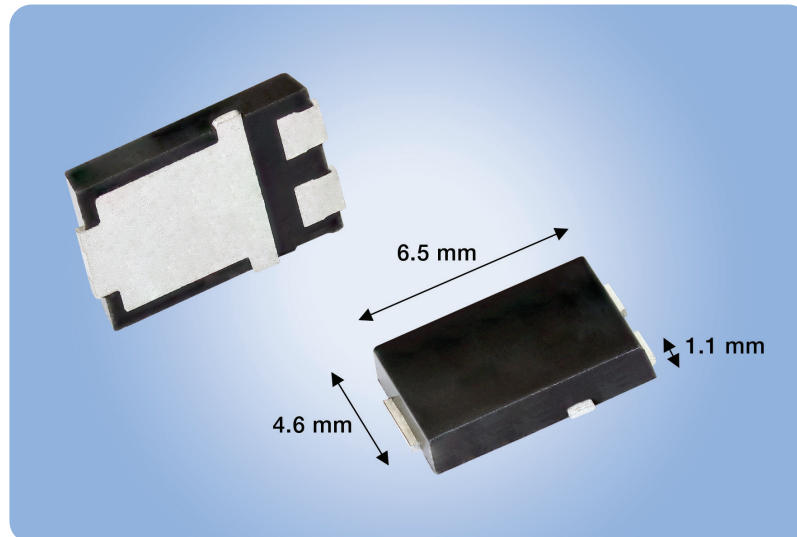




DIODES

FRED Pt[®] Hyperfast and Ultrafast Rectifiers

FRED Pt[®] 4 A to 10 A Hyperfast and Ultrafast Recovery Rectifiers in Compact SMPC Package for Automotive and Telecom Applications



KEY BENEFITS

- Compact SMPC (TO-277A) package
- AEC-Q101 qualified
- Fast recovery time down to 24 ns
- Low leakage current
- Low typical forward voltage drop down to 0.72 V
- Ideal for automated placement
- Allows for automated optical inspection (AOI) in automotive systems

APPLICATIONS

- DC/DC converters and power factor correction (PFC) in automotive engine control units (ECU), antilock braking systems (ABS), and LED lighting, in addition to telecom DC/DC bricks

RESOURCES

- Datasheets: see next page for products
- For technical questions contact: DiodesAmerica@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912





DIODES

FRED Pt[®] Hyperfast and Ultrafast Rectifiers

With their extremely fast and soft recovery characteristics, low leakage current, and low forward voltage drop, the Vishay Semiconductors FRED Pt[®] rectifiers reduce switching losses and over-dissipation in automotive and telecom applications. With a compact footprint and low profile, the devices' SMPC (TO-277A) package saves significant PCB space compared to standard DPAK packages, while increasing power density to lower overall costs. The rectifiers feature a planar structure and platinum-doped lifetime control to guarantee high overall performance, ruggedness, and reliability characteristics, while their operating junction temperature to +175 °C provides a more robust design.

$I_{F(AV)}$ (A)	Part Number	Type	Diode Variation	V_R (V)	V_F typ. (V)	t_{rr} (ns)	AEC-Q101 Qualified
2 x 2	VS-4CSH01-M3	Hyperfast	Dual	100	0.75	24	No
2 x 2	VS-4CSH01HM3	Hyperfast	Dual	100	0.75	24	Yes
2 x 2	VS-4CSH02-M3	Hyperfast	Dual	200	0.75	24	No
2 x 2	VS-4CSH02HM3	Hyperfast	Dual	200	0.75	24	Yes
4	VS-4ESH01-M3	Hyperfast	Single	100	0.73	27	No
4	VS-4ESH01HM3	Hyperfast	Single	100	0.73	27	Yes
4	VS-4ESH02-M3	Hyperfast	Single	200	0.73	27	No
4	VS-4ESH02HM3	Hyperfast	Single	200	0.73	27	Yes
2 x 3	VS-6CSH01-M3	Hyperfast	Dual	100	0.75	27	No
2 x 3	VS-6CSH01HM3	Hyperfast	Dual	100	0.75	27	Yes
2 x 3	VS-6CSH02-M3	Hyperfast	Dual	200	0.75	27	No
2 x 3	VS-6CSH02HM3	Hyperfast	Dual	200	0.75	27	Yes
6	VS-6ESH01-M3	Hyperfast	Single	100	0.74	28	No
6	VS-6ESH01HM3	Hyperfast	Single	100	0.74	28	Yes
6	VS-6ESH02-M3	Hyperfast	Single	200	0.74	28	No
6	VS-6ESH02HM3	Hyperfast	Single	200	0.74	28	Yes
6	VS-6ESH06-M3	Hyperfast	Single	600	1.05	33	No
6	VS-6ESH06HM3	Hyperfast	Single	600	1.05	33	Yes
6	VS-6ESU06-M3	Ultrafast	Single	600	0.95	42	No
6	VS-6ESU06HM3	Ultrafast	Single	600	0.95	42	Yes
2 x 4	VS-8CSH01-M3	Hyperfast	Dual	100	0.72	25	No
2 x 4	VS-8CSH01HM3	Hyperfast	Dual	100	0.72	25	Yes
2 x 4	VS-8CSH02-M3	Hyperfast	Dual	200	0.72	25	No
2 x 4	VS-8CSH02HM3	Hyperfast	Dual	200	0.72	25	Yes
2 x 5	VS-10CSH01-M3	Hyperfast	Dual	100	0.75	25	No
2 x 5	VS-10CSH01HM3	Hyperfast	Dual	100	0.75	25	Yes
2 x 5	VS-10CSH02-M3	Hyperfast	Dual	200	0.75	25	No
2 x 5	VS-10CSH02HM3	Hyperfast	Dual	200	0.75	25	Yes