



DIODES

Standard, Schottky, and Hyperfast FRED Pt[®] Rectifiers

1 A and 2 A Standard, Schottky, and Hyperfast FRED Pt[®] Rectifiers in SMF Package Increase Power Density for Automotive Applications



KEY BENEFITS

- Compact SMF (DO-219AB) package
- AEC-Q101 qualified
 - Schottky rectifiers feature low forward voltage drops down to 0.31 V at 1 A, 125 °C
 - Standard rectifiers provide class H3B ESD protection (> 8 kV)
- FRED Pt[®] ultrafast diodes offer a planar structure and platinum-doped lifetime control
 - Specified for freewheeling and snubber operations
 - Offer soft recovery behavior from -65 °C up to T_j max. = 175 °C
- Available with reverse voltages of 20 V, 30 V, 40 V, 60 V, 100 V, 200 V, and 600 V
- Forward currents up to 2 A
- Ideal for automated placement

APPLICATIONS

- High frequency DC/DC converter, freewheeling diode, and power line polarity protection applications in automotive systems, including engine control units (ECU), antilock braking systems (ABS), and LED lighting

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





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Standard, Schottky, and Hyperfast FRED Pt[®] Rectifiers

These AEC-Q101 qualified devices in the SMF (DO-219AB) package include standard, Schottky, and FRED Pt[®] hyperfast rectifiers. With compact footprints and low profiles, the rectifiers save significant PCB space compared to devices in standard SMA, SMB, and SMC packages, while increasing power density to reduce overall costs. The devices feature a planar structure and platinum-dropped lifetime control to guarantee high overall performance, ruggedness, and reliability characteristics.

Product Category	Part Number	I _F (A)	V _{RRM} (V)	V _F at I _F (T _A = 125 °C)		I _{FSM} (A)	T _J max. (A)	AEC-Q101 Qualified
				V _F (V)	I _F (A)			
Standard Rectifiers	SE10FD	1	200	0.85	1	25	175	Yes
	SE10FG	1	400	0.85	1	25	175	Yes
	SE10FJ	1	600	0.85	1	25	175	Yes
	SE15FD	1.5	200	0.86	1.5	30	175	Yes
	SE15FG	1.5	400	0.86	1.5	30	175	Yes
	SE15FJ	1.5	600	0.86	1.5	30	175	Yes
	SE20FD	2	200	0.85	2	35	175	Yes
	SE20FG	2	400	0.85	2	35	175	Yes
	SE20FJ	2	600	0.85	2	35	175	Yes
Schottky Rectifiers	SL02	1.1	20	0.385	1.1	40	125	Yes
	SL02-M	1.1	20	0.385	1.1	40	125	Yes
	SL03	1.1	30	0.43	1.1	40	125	Yes
	SL03-M	1.1	30	0.43	1.1	40	125	Yes
	SL04	1.1	40	0.47	1.1	40	175	Yes
	SL04-M	1.1	40	0.47	1.1	40	175	Yes
	SS1F4	1	40	0.37	1	40	150	Yes
	SS1FH6	1	60	0.56	1	40	175	Yes
	SS1FH10	1	100	0.57	1	40	175	Yes
	SS1FL3	1	30	0.31	1	40	150	Yes
	SS1FL4	1	40	0.34	1	40	150	Yes
	SS1FN6	1	60	0.38	1	40	150	Yes
	SS2FH6	2	60	0.64	2	40	175	Yes
	SS2FH10	2	100	0.63	2	50	175	Yes
	SS2FL3	2	30	0.37	2	50	150	Yes
	SS2FL4	2	40	0.43	2	50	150	Yes
	SS2FN6	2	60	0.48	2	50	150	Yes
FRED Pt [®] Hyperfast Rectifiers	VS-1EFH01HM3 ⁽¹⁾	1	100	0.74	1	35	175	Yes
	VS-1EFH02HM3 ⁽¹⁾	1	200	0.74	1	35	175	Yes
	VS-2EFH01HM3 ⁽¹⁾	2	200	0.75	2	50	175	Yes
	VS-2EFH02HM3 ⁽¹⁾	2	200	0.75	2	50	175	Yes
	VS-1EFU06HM3 ⁽²⁾	1	600	0.83	1	30	175	Yes
	VS-2EFU06HM3 ⁽²⁾	2	600	0.95	2	30	175	Yes

Notes

⁽¹⁾ 25 t_{rr} (ns)⁽²⁾ 55 t_{rr} (ns)