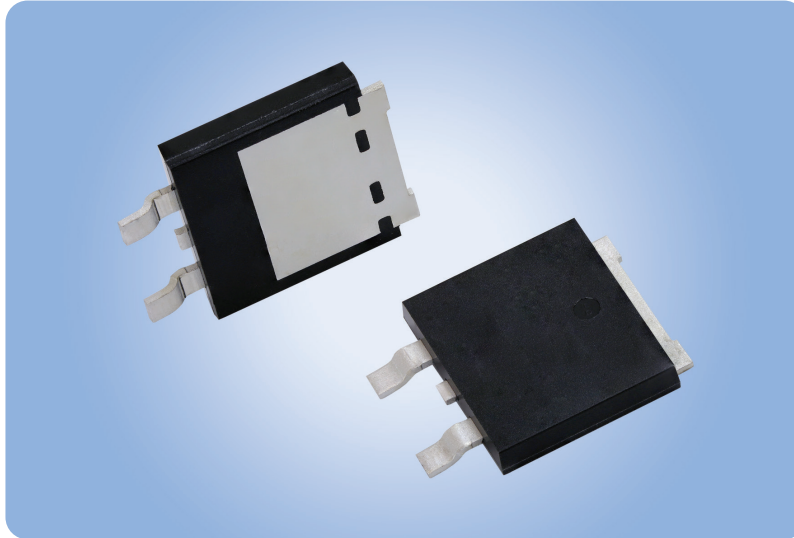




TMBS[®] Rectifiers in Low Profile SMPD Package With Low Forward Voltage Drop Cut Power Losses and Increase Efficiency



KEY BENEFITS

- Low profile SMPD (TO-263AC) package
 - Typical height of 1.7 mm
- Current ratings from 10 A to 60 A
- Low forward voltage drop down to 0.40 V at 15 A
- Low power losses and high efficiency
- AEC-Q101 qualified
- Maximum operating junction temperature of 175 °C
- Trench MOS Schottky technology

APPLICATIONS

- For use in high frequency DC/DC converters, switching power supplies, freewheeling diodes, OR-ing diodes, and reverse battery protection in commercial, industrial, and automotive applications

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

TMBS[®] Rectifiers

The 45 V, 50 V, 60 V, 100 V, 120 V, 170 V, and 200 V TMBS[®] Trench MOS Barrier Schottky rectifiers feature a wide range of current ratings from 10 A to 60 A in the low profile SMPD (TO-263AC) package, which has a typical height of 1.7 mm and is compatible with the D²PAK (TO-263AB) footprint. With low forward voltage drop down to 0.40 V at 15 A, the rectifiers are designed for automotive, industrial, and commercial applications.

I _F (A)	Part Number	V _{RRM} (V)	V _F at I _F (T _A = 125 °C)		I _{FSM} (A)	T _J Max. (°C)	AEC-Q101 Qualified
			V _F (V)	I _F (A)			
10	V10D45C	45	0.41	5	100	150	Yes
	V10D60C	60	0.5	5	100	150	Yes
	V10D100C-M3, V10D100CHM3	100	0.6	5	100	150	Yes
	V10D120C-M3, V10D120CHM3	120	0.64	5	100	150	Yes
	V10D170C	170	0.67	5	100	175	Yes
	V10D202C	200	0.67	5	100	175	Yes
	V10DM45C	45	0.46	5	80	175	Yes
	V10DM60C	60	0.52	5	80	175	Yes
	V10DM100C	100	0.62	5	80	175	Yes
	V10DM150C	150	0.68	5	80	175	Yes
20	V20D45C	45	0.4	10	120	150	Yes
	V20D60C	60	0.49	10	120	150	Yes
	V20D100C	100	0.63	10	120	150	Yes
	V20D170C	170	0.68	10	150	175	Yes
	V20D202C	200	0.68	10	150	175	Yes
	V20DL45	45	0.5	20	160	150	Yes
	V20DL45BP	45	0.5	20	160	200	No
	V20DM45C	45	0.46	10	150	175	Yes
	V20DM60C	60	0.54	10	150	175	Yes
	V20DM100C	100	0.64	10	150	175	Yes
	V20DM120	120	0.71	20	150	175	Yes
	V20DM120C-M3, V20DM120CHM3	120	0.65	10	120	175	Yes
	V20DM150C	150	0.69	10	120	175	Yes
30	V30D45C	45	0.4	15	200	150	Yes
	V30D60C	60	0.57	15	170	150	Yes
	V30D100C	100	0.64	15	150	150	Yes
	V30D170C	170	0.66	15	260	175	Yes
	V30D202C	200	0.66	15	260	175	Yes
	V30D60CL	60	0.49	15	200	150	Yes
	V30DL45	45	0.51	30	240	150	Yes
	V30DL45BP	45	0.51	30	240	150	No
	V30DL50C	50	0.42	15	300	150	Yes
	V30DM45C	45	0.46	15	200	175	Yes
	V30DM60CL	60	0.52	15	200	175	Yes
	V30DM100C	100	0.66	15	160	175	Yes
	V30DM120-M3, V30DM120HM3	120	0.73	30	250	175	Yes
	V30DM120C-M3, V30DM120CHM3	120	0.67	15	150	175	Yes
	V30DM150C	150	0.73	15	140	175	Yes



DIODES

TMBS[®] Rectifiers

I _F (A)	Part Number	V _{RRM} (V)	V _F at I _F (T _A = 125 °C)		I _{FSM} (A)	T _J Max. (°C)	AEC-Q101 Qualified
			V _F (V)	I _F (A)			
35	V35DM120-M3, V35DM120HM3	120	0.73	35	320	175	Yes
40	V40D45C	45	0.4	20	250	150	Yes
	V40D60C	60	0.47	20	250	150	Yes
	V40D100C-M3, V40D100CHM3	100	0.63	20	250	150	Yes
	V40D120C-M3, V40D120CHM3	120	0.64	20	250	150	Yes
	V40DL45	45	0.53	40	240	150	Yes
	V40DL45BP	45	0.53	40	240	150	No
	V40DM45C	45	0.48	20	240	175	Yes
	V40DM60C	60	0.54	20	240	175	Yes
	V40DM100C	100	0.64	20	240	175	Yes
	V40DM120C-M3, V40DM120CHM3	120	0.64	20	250	175	Yes
	V40DM150C	150	0.72	20	160	175	Yes
60	V60D45C	45	0.48	30	320	150	Yes
	V60D60C	60	0.5	30	320	150	Yes
	V60D100C-M3, V60D100CHM3	100	0.66	30	320	150	Yes
	V60D120C-M3, V60D120CHM3	120	0.7	30	320	150	Yes
	V60DM45C	45	0.55	30	320	175	Yes
	V60DM60C	60	0.61	30	320	175	Yes
	V60DM100C	100	0.7	30	320	175	Yes
	V60DM120C-M3, V60DM120CHM3	120	0.7	30	320	175	Yes