



DIODES

45 V to 150 V TMBS® Rectifiers

TMBS® Rectifiers in SlimDPAK (TO-252AE) Package Save Space, Improve Thermal Performance and Efficiency



KEY BENEFITS

- Current ratings up to 35 A for single-chip configurations and 40 A for dual-chip, center-tap common cathode configurations
- Footprint-compatible with the DPAK package with 43 % lower profile enabling ultra slim consumer electronics designs
- Heatsink area is 14 % larger than the DPAK package, allowing for typical thermal resistance down to 1.5 °C/W
- Forward voltage drop:
 - 0.44 V to 0.74 V at 20 A
 - 0.46 V to 0.71 V at 35 A
 - 0.49 V to 0.76 V at 40 A
- Reverse voltages from 45 V to 150 V
- AEC-Q101 qualified versions available

APPLICATIONS

- DC/DC converters and freewheeling and polarity protection diodes

RESOURCES

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





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Vishay Intertechnology introduces a new family of surface-mount TMBS® rectifiers in the eSMP® Series SlimDPAK (TO-252AE) package. Offering lower profiles and better thermal performance than devices in the DPAK (TO-252AA) package, the Vishay General Semiconductor rectifiers feature reverse voltages from 45 V to 150 V, low forward voltage drops to reduce power losses and improve efficiency, and industry-high current ratings.

Vishay P/N	Circuit Configuration	$I_{F(AV)}$ (A)	V_{RRM} (V)	I_{FSM} (A)	V_F at $I_F = 10$ A (V)	V_F at $I_F = 20$ A (V)	V_F at $I_F = 35$ A (V)	T_J max. (°C)	AEC-Q101 Available
V20PW10	Single	20	100	200		0.69		150	Yes
V20PW10C	Common cathode	20	100	150		0.63		150	Yes
V20PWM10	Single	20	100	200		0.70		175	Yes
V20PWM10C	Common cathode	20	100	150	0.63			175	Yes
V20PW12	Single	20	120	200		0.72		150	Yes
V20PW12C	Common cathode	20	120	150	0.66			150	Yes
V20PWM12	Single	20	120	200		0.72		175	Yes
V20PWM12C	Common cathode	20	120	150	0.65			175	Yes
V20PW15	Single	20	150	200		0.74		150	Yes
V20PW15C	Common cathode	20	150	150	0.69			150	Yes
V20PWM15	Single	20	150	200		0.74		175	Yes
V20PWM15C	Common cathode	20	150	150	0.69			175	Yes
V20PW45	Single	20	45	200		0.46		150	Yes
V20PW45C	Common cathode	20	45	150	0.44			150	Yes
V20PWM45	Single	20	45	200		0.51		175	Yes
V20PWM45C	Common cathode	20	45	150	0.46			175	Yes
V20PW60	Single	20	60	200		0.54		150	Yes
V20PW60C	Common cathode	20	60	150	0.51			150	Yes
V20PWM60	Single	20	60	200		0.58		175	Yes
V20PWM60C	Common cathode	20	60	150	0.52			175	Yes
V35PW10	Single	35	100	260			0.68	150	Yes
V35PWM10	Single	35	100	260			0.68	175	Yes
V35PW12	Single	35	120	260			0.70	150	Yes
V35PWM12	Single	35	120	260			0.68	175	Yes
V35PW15	Single	35	150	260			0.71	150	Yes
V35PWM15	Single	35	150	260			0.71	175	Yes
V35PW45	Single	35	45	260			0.46	150	Yes
V35PWM45	Single	35	45	260			0.52	175	Yes
V35PW60	Single	35	60	260			0.55	150	Yes
V35PWM60	Single	35	60	260			0.58	175	Yes
V40PW10C	Common cathode	40	100	240		0.70		150	Yes
V40PWM10C	Common cathode	40	100	240		0.68		175	Yes
V40PW12C	Common cathode	40	120	240		0.73		150	Yes
V40PWM12C	Common cathode	40	120	240		0.70		175	Yes
V40PW15C	Common cathode	40	150	240		0.76		150	Yes
V40PWM15C	Common cathode	40	150	240		0.76		175	Yes
V40PW45C	Common cathode	40	45	240		0.49		150	Yes
V40PWM45C	Common cathode	40	45	240		0.52		175	Yes
V40PW60C	Common cathode	40	60	240		0.57		150	Yes
V40PWM60C	Common cathode	40	60	240		0.59		175	Yes