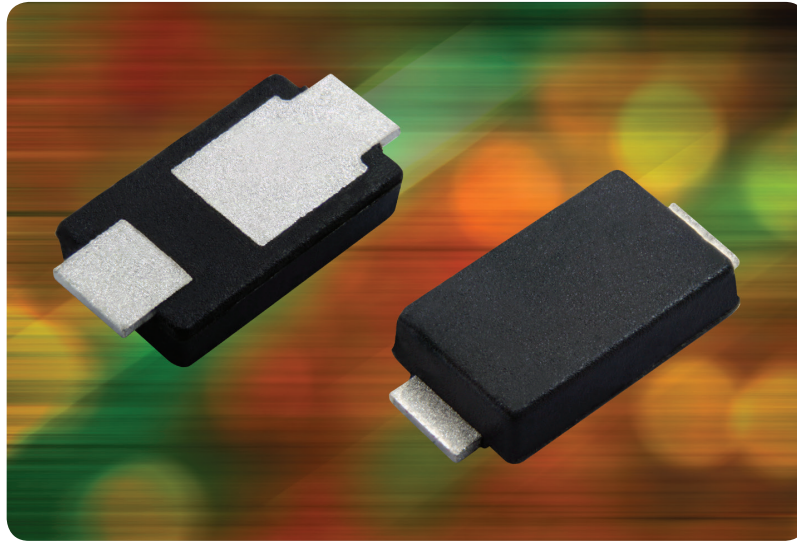


## Low-Profile, Low Forward Voltage Drop TMBS<sup>®</sup> Rectifiers Cut Power Losses and Increase Efficiency in Automotive and Commercial Applications



### KEY BENEFITS

- Very low-profile DO-221BC (SMPA) package
  - Typical height of 0.95 mm
- Current ratings from 3 A to 8 A
- Low forward voltage drop down to 0.37 V at 3 A
  - Low power losses and high efficiency
- Maximum operating junction temperature up to 175 °C
- Trench MOS Schottky technology
- 45 V, 60 V, 100 V, 120 V, and 150 V devices are AEC-Q101 qualified

### APPLICATIONS

- For high-frequency DC/DC converters, switching power supplies, freewheeling diodes, and polarity protection in automotive and commercial applications

### RESOURCES

- Gateway page: <http://www.vishay.com/diodes/rectifiers/schottky/do-221bc-smpa/>
- For technical questions, contact [rectifiers@vishay.com](mailto:rectifiers@vishay.com)
- Material categorization: For definitions of compliance, please see <http://www.vishay.com/doc?99912>





# DIODES

## TMBS<sup>®</sup> Rectifiers

Vishay's 45 V to 150 V TMBS<sup>®</sup> Trench MOS Barrier Schottky rectifiers feature high current density with current ratings from 3 A to 8 A in the low-profile DO-221BC (SMPA) package. The 45 V, 60 V, 100 V, 120 V, and 150 V devices are AEC-Q101 qualified for automotive applications, while the 50 V rectifiers are ideal for commercial applications, especially smartphone and tablet chargers.

**Device Specification Table:**

Product categories	Vishay P/N	I <sub>F</sub> (A)	V <sub>RRM</sub> (V)	V <sub>F</sub> at I <sub>F</sub> and T <sub>J</sub>			I <sub>FSM</sub> (A)	T <sub>J</sub> max (°C)
				V <sub>F</sub> (V)	I <sub>F</sub> (A)	T <sub>A</sub> (°C)		
TMBS	<a href="#">V3PAL45-M3/I</a>	3	45	0.37	3	125	80	150
	<a href="#">V3PAL45HM3/I</a>	3	45	0.37	3	125	80	
	<a href="#">V4PAL45-M3/I</a>	4	45	0.41	4	125	80	
	<a href="#">V4PAL45HM3/I</a>	4	45	0.41	4	125	80	
	<a href="#">V8PAL45-M3/I</a>	8	45	0.40	8	125	120	
	<a href="#">V8PAL45HM3/I</a>	8	45	0.40	8	125	120	
	<a href="#">V3PAN50-M3/I</a>	3	50	0.40	3	125	80	
	<a href="#">V4PAN50-M3/I</a>	4	50	0.46	4	125	80	
	<a href="#">V8PAN50-M3/I</a>	8	50	0.41	8	125	120	
	<a href="#">V8PAL50-M3/I</a>	8	50	0.40	8	125	120	
	<a href="#">V8PA6-M3/I</a>	8	60	0.49	8	125	100	100
	<a href="#">V8PA6HM3/I</a>	8	60	0.49	8	125	100	
	<a href="#">V8PA10-M3/I</a>	8	100	0.61	8	125	100	100
	<a href="#">V8PA10HM3/I</a>	8	100	0.61	8	125	100	
	<a href="#">V8PAM10-M3/I</a>	8	100	0.62	8	125	100	175
	<a href="#">V8PAM10HM3/I</a>	8	100	0.62	8	125	100	
	<a href="#">V8PA12-M3/I</a>	8	120	0.64	8	125	100	150
	<a href="#">V8PA12HM3/I</a>	8	120	0.64	8	125	100	
	<a href="#">V8PAM12-M3/I</a>	8	120	0.65	8	125	100	175
	<a href="#">V8PAM12HM3/I</a>	8	120	0.65	8	125	100	
<a href="#">V8PA15-M3/I</a>	8	150	0.68	8	125	100	150	
<a href="#">V8PA15HM3/I</a>	8	150	0.68	8	125	100		