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## **New V(B,F)T1045CBP, V(B,F)T2045CBP, V(B,F)T3045CBP, and V(B,F)T6045CBP TMBS<sup>®</sup> Trench MOS Barrier Schottky Rectifiers**

### **The News:**

**Vishay Releases 12 New 45 V TMBS<sup>®</sup> Trench MOS Barrier Schottky Rectifiers in Power TO-220AB, ITO-220AB, and TO-263AB Packages With Wide Range of Current Ratings From 10 A to 60 A and  $V_F$  Down to 0.33 V Typical at 10 A for PV Solar Cell Bypass Protection**

Vishay Intertechnology, Inc. (NYSE: VSH) introduces 12 new 45 V TMBS<sup>®</sup> Trench MOS Barrier Schottky rectifiers in three power package options that feature a wide range of current ratings from 10 A to 60 A for use in solar cell junction boxes as bypass diodes for protection.

### **Product Benefits:**

- Current ratings from 10 A to 60 A
- Extremely low forward voltage drops down to 0.33 V typical at 10 A
- Each device is offered in the power TO-220AB, ITO-220AB, and TO-263AB packages
- Dual chip center-tap configuration
- Maximum operation junction temperature of 150 °C
- $\leq 200$  °C maximum junction temperature in DC forward current without reverse bias ( $t \leq 1$  hour)
- Compliant to RoHS Directive 2002/95/EC and WEEE 2002/96/EC
- TO-263AB package offers an MSL moisture sensitivity level of 1, per J-STD-020, LF maximum peak of 245 °C
- TO-220AB and ITO-220AB packages feature solder bath temperatures of 275 °C maximum, 10 s, per JESD 22-B106, and are halogen free according to the IEC 61249-2-21 definition





## The Key Specifications:

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	VT1045CBP-M3	10	45	0.41	5	125	100	150
	VBT1045CBP-E3	10	45	0.41	5	125	100	
	VFT1045CBP-M3	10	45	0.41	5	125	100	
	VT2045CBP-M3	20	45	0.41	10	125	160	
	VBT2045CBP-E3	20	45	0.41	10	125	160	
	VFT2045CBP-M3	20	45	0.41	10	125	160	
	VT3045CBP-M3	30	45	0.39	15	125	200	
	VBT3045CBP-E3	30	45	0.39	15	125	200	
	VFT3045CBP-M3	30	45	0.39	15	125	200	
	VT6045CBP-M3	60	45	0.47	30	125	320	
	VBT6045CBP-E3	60	45	0.47	30	125	320	
	VFT6045CBP-M3	60	45	0.47	30	125	320	

## Market Applications:

- Bypass diodes for protection in solar cell junction boxes

## The Perspective:

Vishay's 12 new 45 V TMBS Trench MOS Barrier Schottky rectifiers feature a wide range of current ratings from 10 A to 60 A in the power TO-220AB, ITO-220AB, and TO-263AB packages. With extremely low forward voltage drops down to 0.33 V typical at 10 A, the rectifiers are designed for bypass protection in solar cell junction boxes.

**Availability:** Samples and production quantities of the new 45 V TMBS rectifiers are available now, with lead times of eight weeks for larger orders.

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