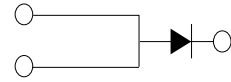


Feature

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Built-in strain relief, ideal for automated placement
- Low forward voltage drop
- High forward surge current capability
- High temperature soldering guaranteed 250 °C/10 seconds at terminals


Circuit Diagram
Mechanical Characteristics

- Case : Molded plastic body
- Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity : Polarity symbol marking on body
- Mounting Position : Any
- Weight : 0.003 ounce, 0.092 grams

Absolute maximum rating And Electrical characteristics @25°C

Parameter	Symbol	PSBD3T D40V10A	PSBD3T D45V10A	PSBD3T D50V10A	PSBD3T D60V10A	PSBD3T D80V10A	PSBD3TD 100V10A	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	45	50	60	80	100	V
Maximum RMS voltage	V_{RMS}	28	31.5	35	42	56	70	V
Maximum DC Blocking Voltage	V_{DC}	40	45	50	60	80	100	V
Maximum Average Forward Rectified Current @ $T_L=100^{\circ}C$	$I_{F(AV)}$	10						A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	175						A
Maximum Forward Voltage	V_F	at 2.0 A		0.35		0.40	0.45	V
		at 10 A		0.48		0.55	0.70	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A=25^{\circ}C$		0.5		0.2		mA
		$T_A=125^{\circ}C$		50		20		
Typical Thermal Resistance	$R_{\theta JA}$	60						$^{\circ}C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55~+150						$^{\circ}C$

Typical Characteristics

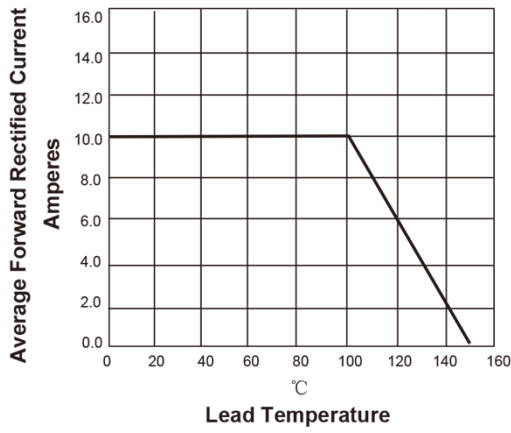


FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

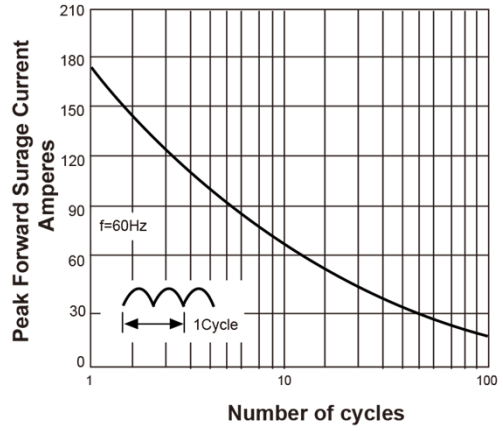


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

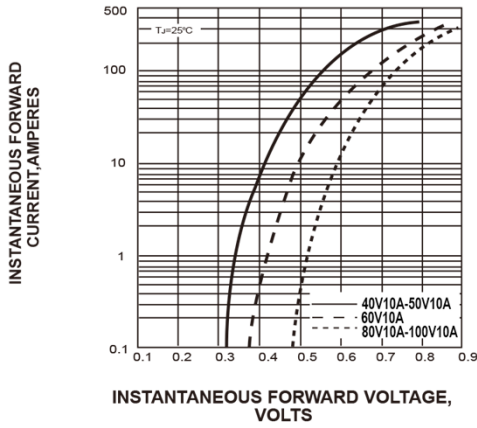


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

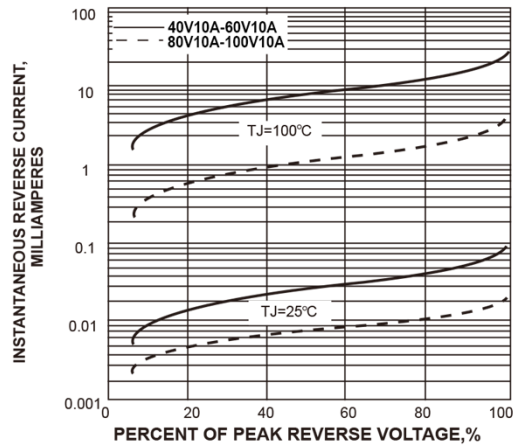
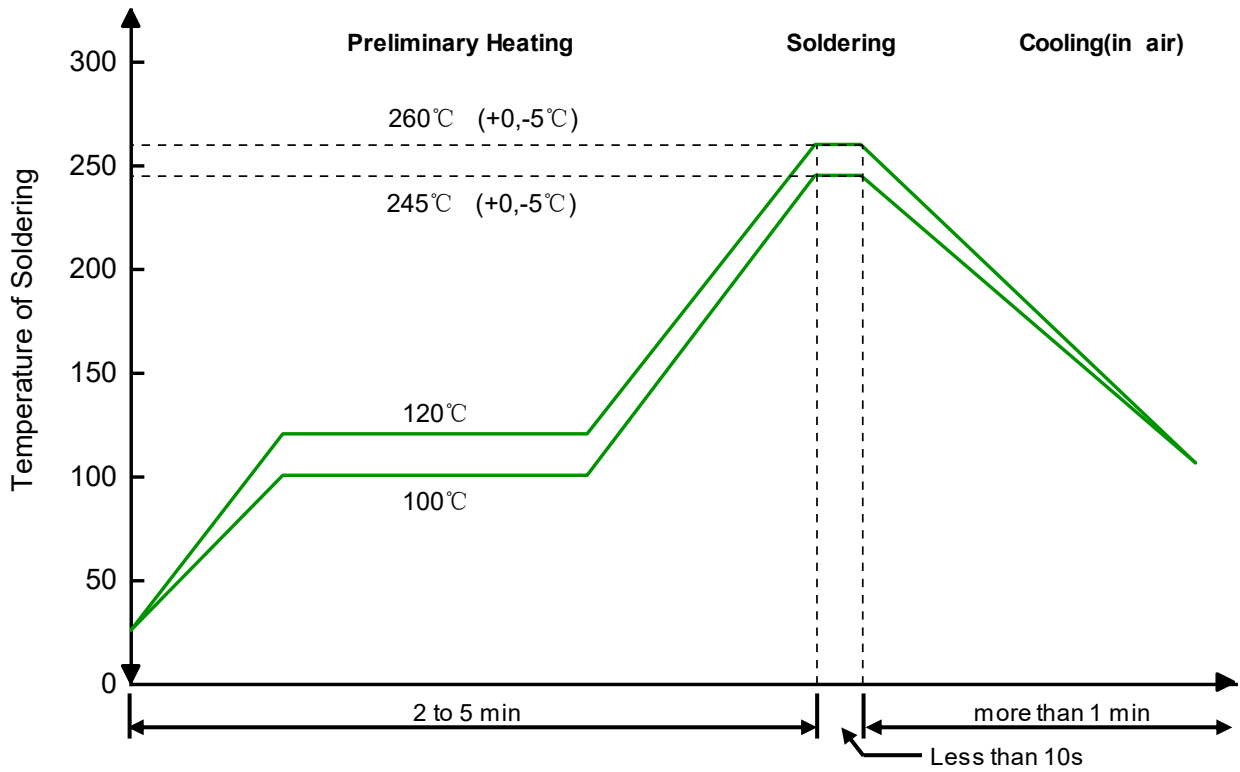


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

Solder Reflow Recommendation

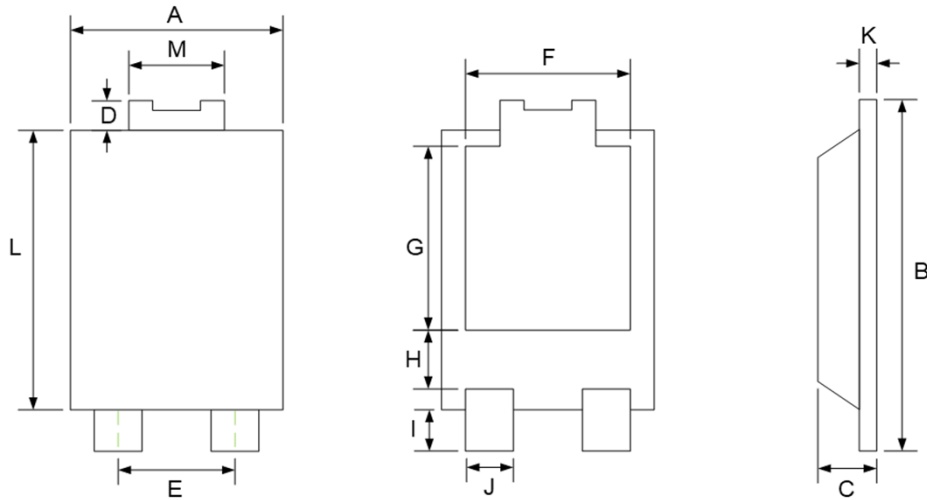


Remark: Pb free for 260°C; Pb for 245°C.

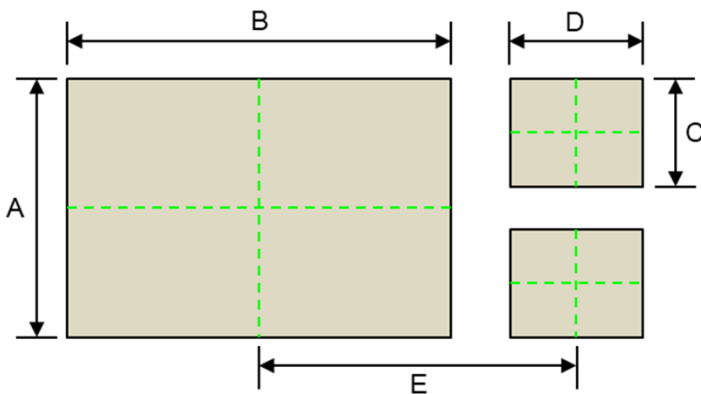
Ordering information

Device	Package	Reel	Shipping
PSBD3TDxxV10A	TO-277B	13"	5000 / Tape & Reel

Product dimension (TO-277B)



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	3.90	4.10	0.154	0.161
B	6.40	6.60	0.252	0.260
C	1.00	1.20	0.039	0.047
D	0.45	0.70	0.018	0.028
E	1.75	1.95	0.069	0.077
F	3.00	3.30	0.118	0.130
G	3.40	3.70	0.134	0.146
H	1.00	1.40	0.039	0.055
I	0.50	0.70	0.020	0.028
J	0.80	1.00	0.031	0.039
K	0.20	0.40	0.008	0.016
L	5.30	5.50	0.209	0.217
M	1.70	1.90	0.067	0.075




Suggested PCB Layout

Unit:mm

Dim	Millimeters	Inches
A	3.60	0.142
B	5.35	0.211
C	1.50	0.059
D	1.85	0.073
E	4.30	0.169


IMPORTANT NOTICE

 and **Prisemi**[®] are registered trademarks of **Prisemi Electronics Co., Ltd** (Prisemi), Prisemi reserves the right to make changes without further notice to any products herein. Prisemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Prisemi assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in Prisemi data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. Prisemi does not convey any license under its patent rights nor the rights of others. The products listed in this document are designed to be used with ordinary electronic equipment or devices, Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

Website: <http://www.prisemi.com>

For additional information, please contact your local Sales Representative.

©Copyright 2009, Prisemi Electronics

 **Prisemi**[®] is a registered trademark of Prisemi Electronics.

All rights are reserved.